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- 本机只用于所明确设计的用途，切勿移作它用。
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注意事项

- 本机器必须由受过专门培训并合格的人员进行操作使用，未经厂家允许或未按说明书要求，任意改动机器零部件和使用范围都可能对机器引起直接或间接的损坏。
- 应把轮胎拆装机安装固定在平稳的地面上。
- 在轮胎拆装机的背面和墙壁之间，应留有 0.5M 的距离，以保证良好的通风散热。请注意在轮胎拆装机的左右两侧留有足够的空间，以使操作不受限制。
- 勿使轮胎拆装机处于极端温度和湿度环境中。避免将其安置在暖气设备、水龙头、空气加湿器或火炉旁。
- 勿把轮胎拆装机安置在阳光能直接照射的地方。在不可避免的情况下，应使用窗帘、挡板或防护罩遮蔽轮胎拆装机。
- 应使轮胎拆装机避免接触大量灰尘、氨气、酒精、稀释剂或喷雾型粘合剂等。
- 机器工作时，非操作人员请勿靠近机器。
- 使用合适的设备和工具，及安全保护设施，如：工作服、护目镜、耳塞、安全鞋等。
- 请特别注意粘贴在机身上的各种安全标识。
- 注意在轮胎拆装机工作时，切勿将手或身体的其它部位接触运动件。
- 特别注意不要卸掉机器的安全装置或者使其不起作用。
- 本机使用的润滑脂为 2 号锂基润滑脂，请务必在安全范围内使用，其 安全数据见附录。
- 在挪动轮胎拆装机之前，应与维修服务人员取得联系。

安全标识图解

- 为防止意外，在固定拆装头或转盘转动时，请注意手和身体其他部位与拆装头的距离。

- 在接、拔气管时一定要小心！应先关闭气源，排尽机器体内气体，避免造成人员伤害。

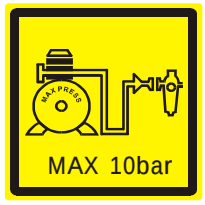
- 压胎时应小心谨慎，当踩下分离铲脚踏时，分离铲会迅速而有力地移动，请操作者注意自身部位及其工作范围内的物品的安全。

- 注意，在压胎时，若夹紧气缸是开的，会刮伤操作者的手。切记在压胎时不要用手接触轮胎侧壁。

- 夹紧轮辋时，请注意手和其他部位勿进入卡爪与轮辋之间。

- 高压电源所在处 !小心触电！

- 在立拄摆动区域要注意安全，以免造成人员伤亡。



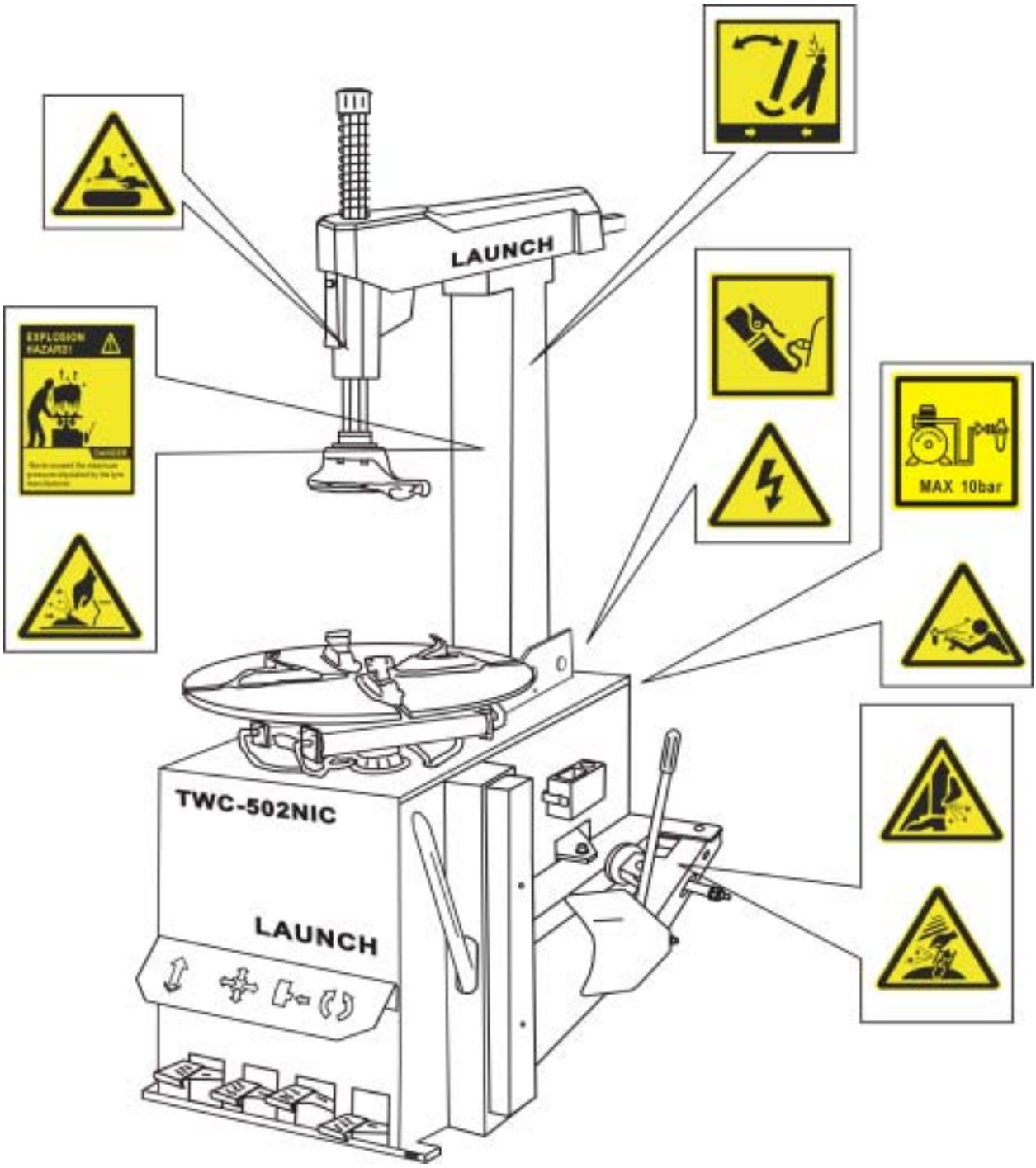
- 压缩空气的网路不允许超过 10bar。

- 此处为充气枪气路联结处，将其与压缩空气网路联结。

- 充气前，应检查轮胎和轮辋是否匹配与完好，否则出现问题时是极其危险的，可能会引起爆炸，从而会使操作者或周围的人受伤甚至死亡。如所充气压超出规定气压过大也将会出现此种事故。

安全标识位置示意图

以 TWC－502NIC 为例：



- 安全标识模糊或丢失时，应立即更换新标识。
- 一个或多个标识丢失时，请不要使用本设备。
- 应使操作者清楚地看见安全标识。

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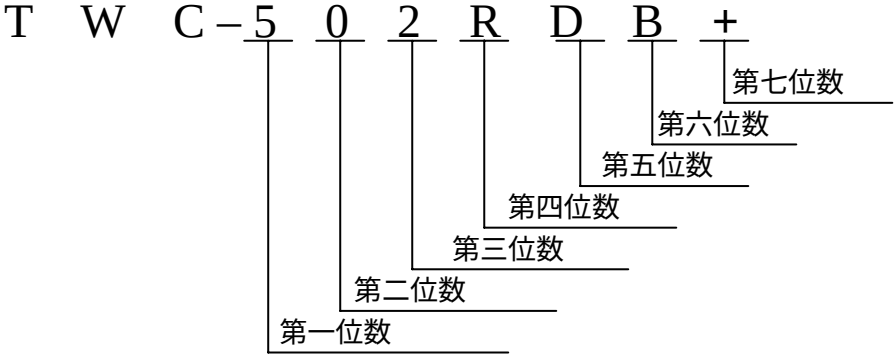
第一章 概述

1.1 TWC 系列轮胎拆装机型号命名规则

一、命名图示：

1. TWC——字母代表轮胎拆装机产品系列的统称。
2. 图表说明：



二、代码定义：

1. 第一位数(代表装夹轮胎的范围)：① 4－10” ～19”(20”);
   ② 5－10” ～23”(24”);
   ③ 6－10” ～26”;
2. 第二位数(代表工作盘形状)：① 0 - 圆盘;
   ② 1 - 方盘;
   ③ 2 - 十字盘;
   ④ 3 - 不对称盘;
3. 第三位数(代表立柱工作方式)：① 1 - 摇臂(半自动);
   ② 2 - 倒臂(自动);
   ③ 3 - 摆臂(自动);
4. 第四位数(代表辅助臂功能)：① R - 右辅助臂;
   ② L - 左辅助臂;
   ③ S - 双辅助臂;
   ④ N - 无辅助臂;
5. 第五位数(代表打气表形式)：① I - 枪式打气表;
   ② M - 盒式指针式打气表;
   ③ D - 智能（LED 数显）打气表;
6. 第六位数（代表充气方式）：① B - 快速充气;
   ② C - 普通充气;
7. 第七位数（代表举升机构）： ＋ 含举升机构

三、例子说明：

TWC-502RDB+ ----此型号机器的装夹范围是 5－10” ～23”(24”)、工作盘形状是圆盘、立柱工作方式倒臂(自动)、右辅助臂、智能（LED 数显）打气表、快速充气、含举升机构的轮胎拆装机。

1.2 用途

TWC 系列轮胎拆装机兼拆胎、装胎、充气于一体，操作简单，使用方便，安全可靠。适用于各种中小型车轮胎的拆、装和充气，是汽车修理厂和汽车轮胎店的得力助手。

1.3 功能和特点

- 兼拆胎、装胎、充气于一体，适用范围广。
- 钢质拆装头采用优质合金材料精铸而成，造型独特、经久耐用；另附送的塑胶拆装头是采用特殊的工程塑料精心设计而成，既具有足够的强度，又不会损伤轮胎和轮辋。
- 两个夹紧气缸确保中心定位精确，并夹紧可靠。
- 脚踏的布置符合人体设计工程，方便操作。
- 分离铲分离范围大，能适用于多种规格的车轮。
- 撬杠和润滑液盒位置便于操作员取放。

1.4 技术参数

设备参数

型号	高度 mm	长度 mm	宽度 mm	净量 kg
TWC-4*1***	1705	1020	810	204
TWC-4*2***	1725	1020	810	218
TWC-5*1***	1820	1015	870	228
TWC-5*2***	1880	1350	950	320
TWC-6*2***	1880	1350	950	340

噪音

工作噪音:<70dB(A)

气动装置

工作压力：8－10bar

分离铲工作压力：18000N

机器电气参数

电机(可选)

电压：根据客户需求可选不同电压的电机

AC110V(±5%) 60Hz（±1Hz）

或 AC220V(±5%) 50Hz（±1Hz）

或 AC230V(±5%) 60Hz（±1Hz）

功率：1.1kW

相数：单相

转盘转数：6－8r／min

1.5 适用范围

型号	最大车轮直径：	最大车轮宽度
4 系列	960mm(38＂)	360mm(14＂)
5 系列	960mm(38＂)	380mm(15＂)
6 系列	1050mm(41＂)	380mm(15＂)

1.6 环境要求

工作温度：-40℃－45℃

运输/存贮温度：-40℃－55℃

相对湿度：30－95%

使用海拔高度：最大 1000m

第二章　机器基本结构

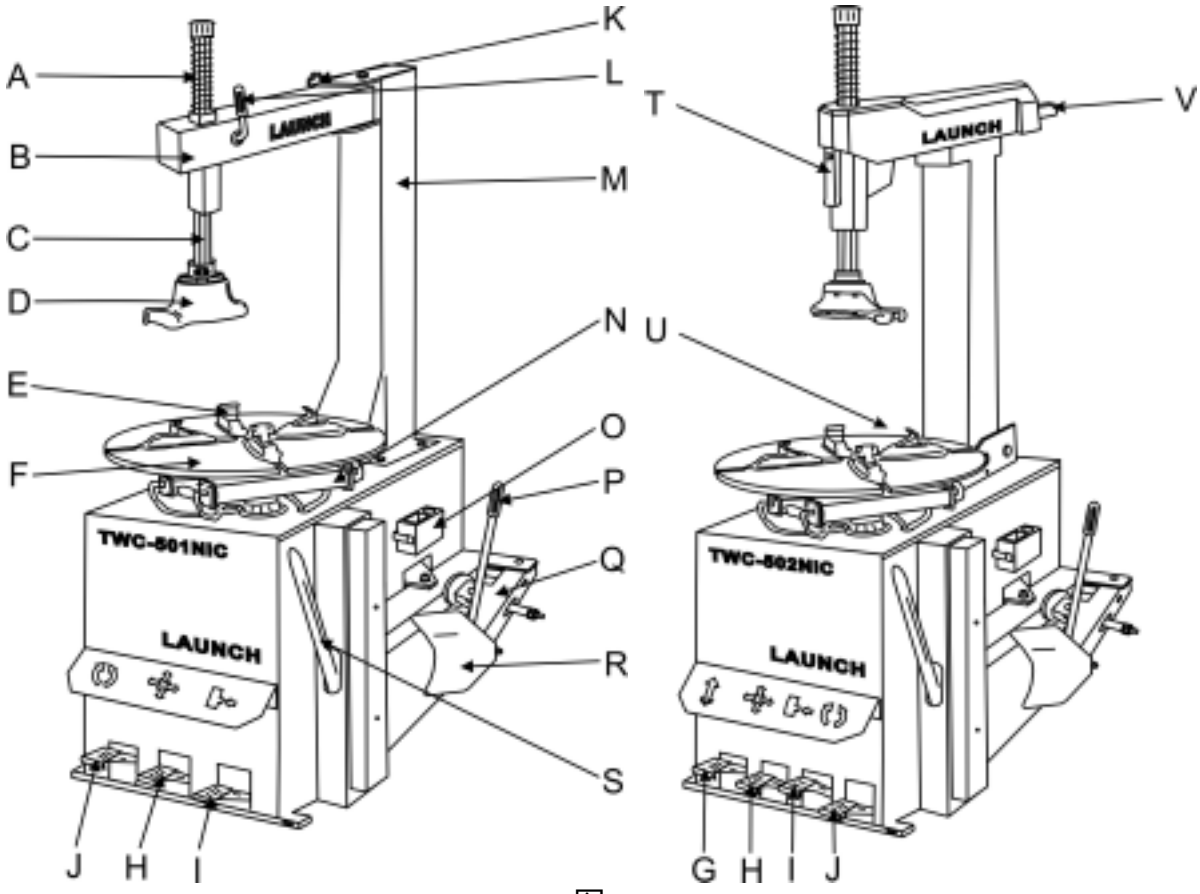


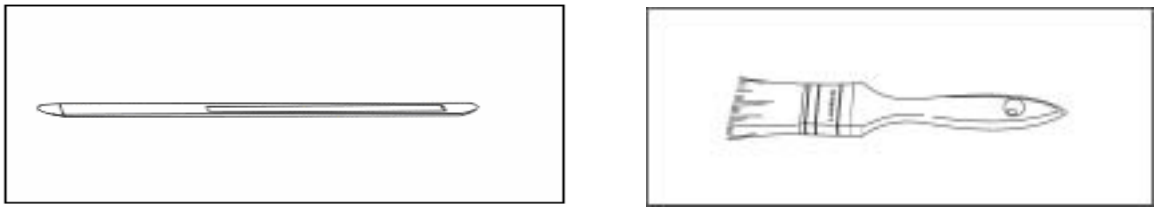
图 1

产品结构组成如图 1 所示：

A、回位弹簧 B、横摇臂 C、六方杆 D、拆装头 E、卡爪 F、转盘 G、立柱摆动脚踏 H、 夹紧气缸脚踏 I、分离铲脚踏 J、转盘转向脚踏 K、旋扭手柄 L、六方杆锁紧手柄 M、立柱 N、夹紧气缸 O、润滑液盒 P 、分离铲操纵手柄 Q、分离铲臂 R、分离铲 S、撬杠 T、锁紧手柄 U、气源三联件 V、四方横梁

（以下叙述中所提及的部件名称和字母标号以此图为准）

随机提供的配件如图 2 所示：



撬杠　　毛刷

图 2

第三章　基本操作说明

注意：

- 操作人员必须经过培训，合格后方能操作轮胎拆装机，操作时需使用合适的设备和工具，穿着防护工作服，使用合适的安全保护设施，如：护目镜，耳塞，安全鞋等。
- 操作前应确保油雾器中的油在油标范围之内。

3.1 基本原则

- 当安装和拆卸轮胎时为了不损伤轮辋特别是铝合金轮辋必须使用专用的轮胎撬杠。
- 为了方便轮胎的拆卸和保护轮胎和轮辋，因此在轮胎和轮辋之间，分离铲要插入的位置（轮缘和轮肩处）使用工业润滑剂或浓肥皂水进行润滑。
- 对于某些类型的轮胎，要注意轮胎外侧壁的凸缘和轮胎上标出的转动方向。
- 所安装的轮胎尺寸应与轮辋尺寸相一致。
- 在安装和拆卸轮胎之前要检查轮辋是否受过损伤（变形或轮辋外缘的表面受损；轮辋轴向或径向的跳动过大；腐蚀或整体磨损）。
- 在任何情况下，要注意轮胎制造商对专用轮胎的安装和拆卸的要求。
- 在给轮胎充气的时候要使轮胎内的压力均匀增加，并且注意胎缘状态。

3.2 拆胎操作

准备工作

- 将轮胎中的空气全部放掉。
- 清除车轮上的杂物和平衡块，以免发生危险。去除平衡块时应使用专用工具（如图 3 所示）。

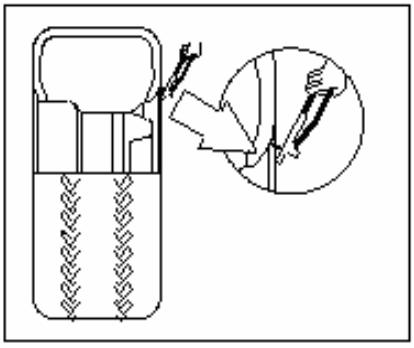


图 3

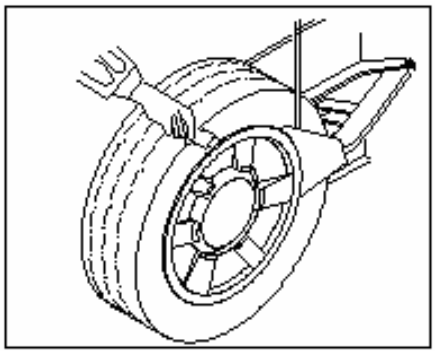


图 4

拆卸轮胎

注意：

拆胎前，请先用毛刷蘸取润滑剂盒中事先放好的有效润滑剂，再润滑胎缘（如图 4），否则在压胎时分离铲会磨损胎缘。

- 将轮胎置于分离铲和橡胶垫之间，使分离铲边缘置于胎缘与轮辋之间，离轮辋边缘大约 1cm 处（如图 5），然后踩分离铲脚踏“ ”，使胎缘与轮辋分离。
- 在轮胎其他部分重复以上操作，使胎缘与轮辋彻底分离。
- 把胎缘与轮辋已分离的车轮放在转盘上（对于不对称的深槽轮辋，应将窄的轮辋朝上放置）。

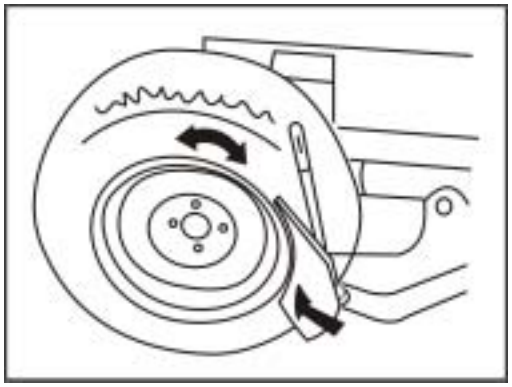


图 5

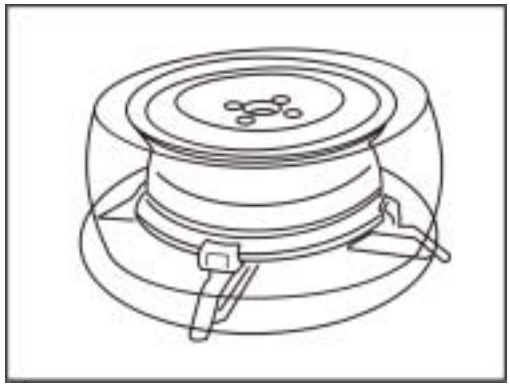


图 6

- 脚踩夹紧气缸脚踏“ ”到底，夹紧轮辋。

说明：此时可根据不同轮辋选择不同的夹紧方式。

- 如选择轮辋内锁定方式，先将卡爪收缩，再将车轮安置转盘上，最后脚踩夹紧气缸脚踏“ ”将轮辋夹紧。
- 如选择轮辋外锁定方式（如图 6），先将卡爪张开一定范围（大于轮辋外围 2-3cm），再将车轮安置转盘上，最后脚踩夹紧气缸脚踏“ ”将轮辋夹紧。

- **（摇臂式）**拉回横摇臂，调整横摇臂（3）（如图 7）和六方杆（4）的位置，使拆装头内侧贴紧轮辋外缘，然后转动旋扭手柄（12）将横摇臂顶住，再顺时针旋转六方杆锁紧手柄（2）将六方杆锁紧。这时拆装头内侧自然距离轮辋边缘 1～2mm 距离，避免划伤轮辋（如图 9）。
- **（倒臂式）**脚踩脚踏“ ”，使立柱回位于工作位置（如图 8），调整六方杆的上下位置和四方横梁的前后位置，使拆装头紧靠轮辋外缘，然后按下锁紧手柄上的按钮 a（图 8），以锁紧六方杆，这时拆装头内侧自然距离轮辋边缘 1～2mm 距离，避免划伤轮辋（如图 9）。

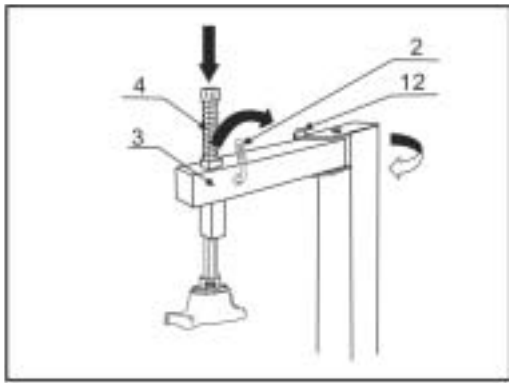


图 7

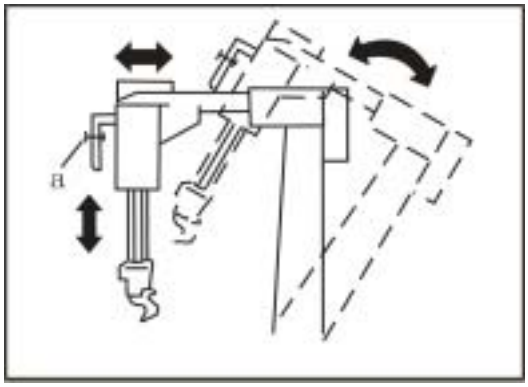


图 8

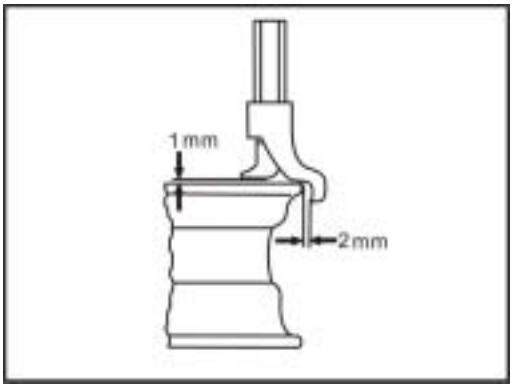


图 9

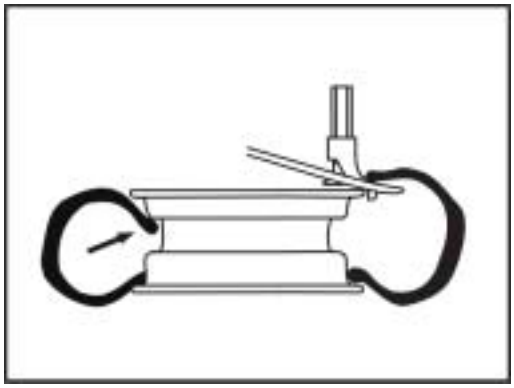


图 10

注意：

拆装头角度在出厂时已按标准轮辋(15＂)调校完毕，如遇特大或特小轮辋时，请重新调整拆装头的角度（调整方法见安装调试手册），以免损伤轮胎。

- 用撬杠将胎缘撬在拆装头上（为了方便撬出，将拆装头对面的胎缘上缘向下压，压到轮槽以内后，再使用专用撬杠将胎缘撬出）（如图 10），脚踩脚踏“ ”，让转盘顺时针旋转，直到胎缘脱落为止。如果有内胎，为了避免损坏内胎，在进行这步操作时，建议将轮胎气门嘴置于拆装机头右边 10mm 左右（如图 11）。

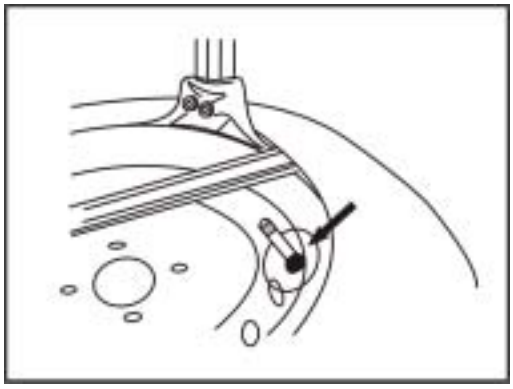


图 11

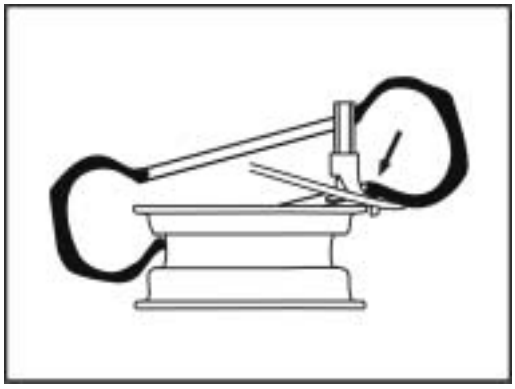


图 12

注意：

如拆胎受阻，应立即让机器停止运转，用脚面上抬脚踏“ ”，让转盘逆时针转动，消除障碍。

- 如果有内胎，先取出内胎。
- 上抬轮胎，而后使拆装头相对位置的下胎缘进入轮槽（如图 12）再将下胎缘撬到拆装头球形突起之上。
- 然后踩下脚踏“ ”直至下轮缘脱离轮辋。
- 踩下脚踏“ ”松开卡爪，取下轮辋，拆胎完成。

注意：

在操作过程中，尽可能使手和身体其他部位远离运动件，佩戴项链、手镯及着装宽松的服装对操作人员来说是危险的！

3.3 装胎操作

说明：

在安装轮胎之前，检查轮胎和轮辋尺寸是否相符。

- 夹紧轮辋（方法同拆胎锁紧操作）。
- 在轮胎和轮辋上涂上有效的润滑剂，如浓肥皂水等。
- **（摇臂式）**将轮胎倾斜放在轮辋上，左端向上，将横摇臂拉回，进入工作位置。
- **（倒臂式）**将轮胎倾斜放在轮辋上，前端向上（如图 13），踩下立柱摆动脚踏“ ”使立柱回位（如图 13），并调整拆装头与轮辋位置，然后按下锁紧按钮。
- 检查拆装头与轮辋的配合情况，如不符，进行调整。

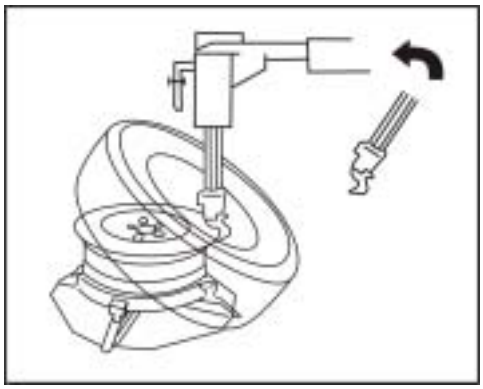


图 13

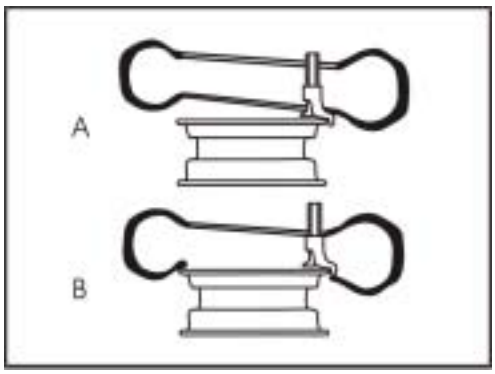


图 14

- 调整轮胎与拆装头的相对位置，使轮胎内缘与拆装头交叉。在拆装头尾部，应使胎缘置于拆装头上（如图 15A）；在拆装头前端，应使胎缘置于拆装头球型突起之下（如图 15B）。
- 压低胎肚，脚踩脚踏“ ”顺时针旋转转盘，让下部胎缘完全落入轮辋槽内。
- 如需要安装内胎，检查内胎是否受过损伤，然后将其套在轮辋上，(在整个安装过程中需要注意内胎的位置)。

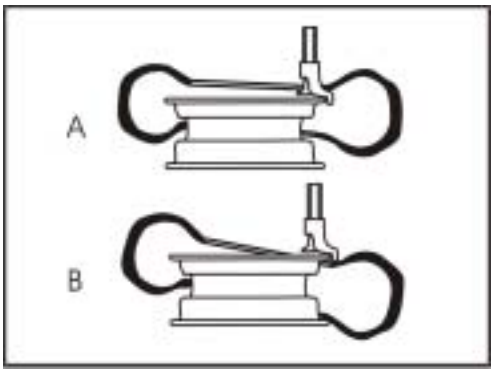


图 15

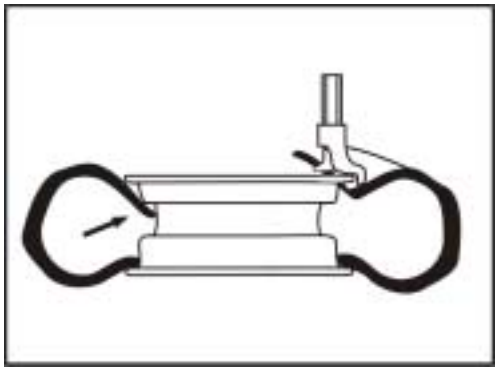


图 16

- 为了安装上胎缘，重新放好轮胎，调整好胎缘位置（与安装下胎缘相同，如图 15），用手压低胎肚，尽量使胎缘进入轮槽内（如图 16）。
- 踩下转盘转向脚踏“ ”，此时手不要放开。当还有 10—15cm 的轮胎未装入时，动作要放慢并注意观察轮胎的状态以免撕伤轮胎。一旦感到轮胎有撕伤的迹象或电机停止转动。请立即松掉脚踏，然后用脚面抬脚踏“ ”使电机反转，使轮胎恢复原状以便再次进行。

⚠说明：

- ◆ 如果操作过程中的轮辋尺寸相同，拆装完成后不必松开锁紧阀，拆装前也不必进行调整拆装头，只须踩下立柱摆动脚踏，立柱自动后仰或回位即可操作。
- ◆ 在踩立柱摆动脚踏之前，应确保立柱后无人。
- ◆ 在锁紧的过程中，注意头，手等部位勿进入轮胎和四方横梁之间，避免造成人身伤害。

3.4 充气操作

⚠危险！！

轮胎充气时非常危险，应小心谨慎并严格遵守操作规程。充气之前请检查气路连接是否完好！
本机配有一个压力表充气装置，用于轮胎充气及充气压力的读取。

- 将车轮从转盘上松开。
- 将充气管接头与轮胎气门嘴相连，如图 17 所示。

- 缓慢并多次（以免充气压力过高）点踩充气脚踏，确定压力表显示的压力不超过轮胎生产厂家所注明的范围，所充气压不要超过 3.5bar。(用户也可以根据要求，调整机箱内的减压阀得到不同的充气压力)。
- 如充气压力过高，可用拇指按下充气装置上的放气按钮，以达到所需气压。
- **（快速充气）**如果是无内胎轮胎，并且轮胎与轮辋配合不密封时，以上充气方式将起不了作用，这时应先进行快速充气再进行以上操作。快速充气方法：先脚踩脚踏“ ”将轮辋夹紧，再脚踩拆装箱体右侧充气脚踏到底，然后迅速松开脚踏，听到砰的一声后快速充气结束。

⚠特别注意

此步操作一定要确保车轮被卡爪夹紧，否则将会有生命危险。

⚠警告！有爆炸危险！

严格按照以上安全操作，仔细阅读并遵从下列操作说明，否则可能会导致操作者或周围的人严重损伤或致死。

如因没按照安全操作说明操作，出现的事故，厂家概不负责。

- ◆ 认真检查轮辋与轮胎的尺寸是否相同，并检查轮胎的磨损情况，确认轮胎在充气前没有损坏。
- ◆ 当轮胎充气所需的压力较高时，从轮胎拆装机上取下车轮，在一特殊的保护罩内继续充气过程。
- ◆ 给轮胎充气要特别小心，集中精力，让手和身体尽量远离轮胎。

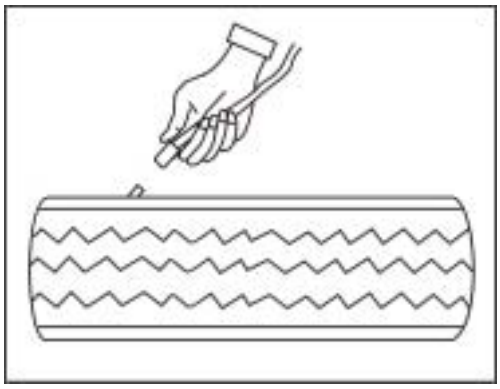
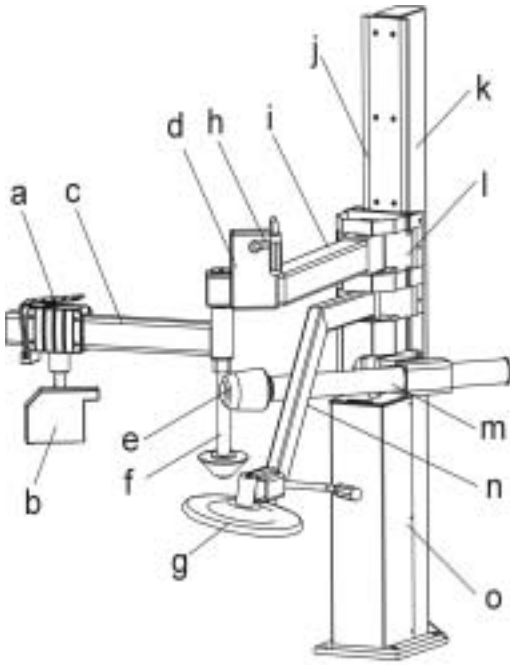


图 17

第四章 TWC 系列右辅助臂说明

4.1 基本结构（如图 18）



a、压胎座；
b、压块；
c、前转臂；
d、控制盒；
e、压胎轮；
f、定位锥；
g、托胎盘；
h、控制杆；
i、后转臂；
j、导轨；
k、立柱组焊件；
l、滑板；
m、压胎横杆；
n、托盘臂；
o、升降气缸。

图 18

4.2 操作方法

⚠注意：

- 本辅助臂仅限于与元征 TWC－4、5、6 系列气动轮胎拆装机主机配套使用，切勿装在其他类型机器上面否则一切后果元征公司概不负责。
- 本辅助臂转臂组件具有自动定心功能，当后转臂移到中心时将会自动锁紧，上抬控制杆即解锁。

4.2.1 拆卸轮胎

- 将轮胎按第三章中所说的方法分离完胎缘后，借用辅助臂我们可以更简便的操作。
- 在选择轮辋外锁定方式时为了更方便的夹紧轮毂，借助辅助臂我们可以进行如下操作：先将卡爪张开一定范围（大于轮辋外围 2-3cm），再将车轮安置转盘上，拉出转臂，装上定位锥，并将定位锥对准车轮中心孔（如图 19），下压升降杆使轮辋贴近卡爪，最后脚踩脚踏“ ”将轮辋夹紧（如图 20），取下定位锥。

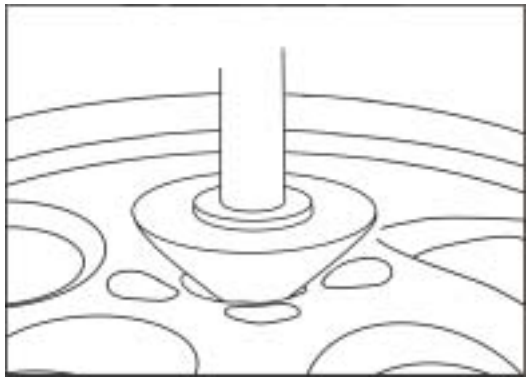


图 19

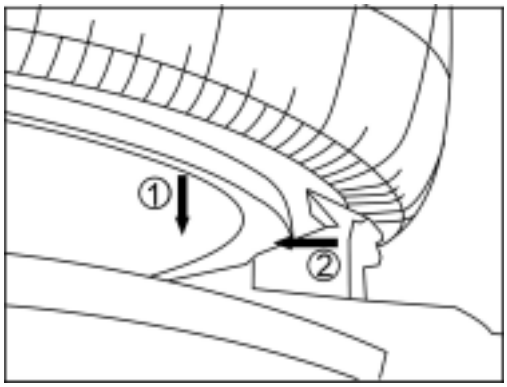


图 20

- 拉出压胎轮使其靠近胎缘，下压升降杆，使其向下压 3—5cm，脚踩脚踏“ ”使转盘顺时针转动，同时用毛刷蘸取润滑剂涂抹于胎缘（如图 21）。

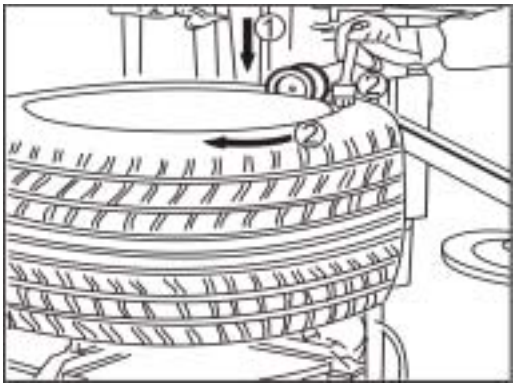


图 21

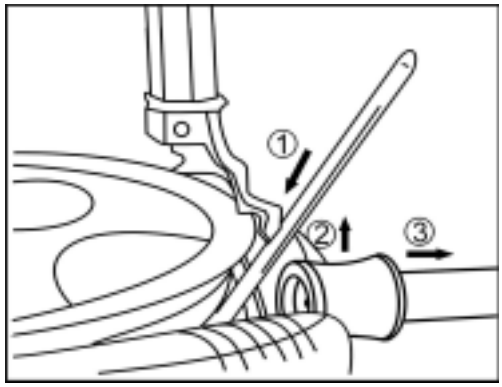


图 22

- 按照第三章的方法将拆装头放至合适位置并且锁紧。
- 将撬杠插进拆装头与胎缘之间，然后上抬升降杆使压胎轮与轮胎脱离，然后将其回位（见图 22）。
- 转动弯臂，将臂端压块放于拆装头对面的轮胎上缘，然后下压升降杆使压块下压 5—6cm，然后用撬杠将胎缘撬在拆装头上（如图 23）胎缘与拆装头的相对位置如第三章所述。

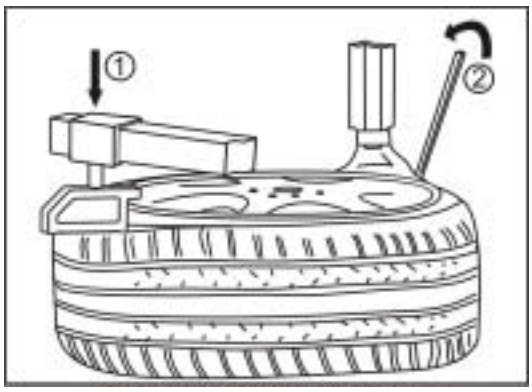


图 23

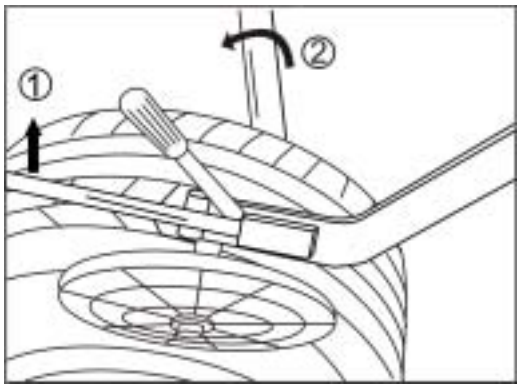


图 24

- 撤出压块使其回位，脚踩脚踏“ ”，让转盘顺时针旋转，直到胎缘脱落为止。如果有内胎，为了避免损坏内胎，在进行这步操作时，建议将轮胎气门嘴置于拆装机头右边 10cm 左右。
- 如果有内胎，先取出内胎。
- 拉出托胎盘，将盘壁贴近轮胎下缘；再将撬杠插入拆装头与轮胎的缝隙，并将其往轮辋方向压；将升降杆向上拨，上抬轮胎，而后使拆装头相对位置的下胎缘进入轮槽再将下胎缘撬到拆装头球型突起之上。（如图 24）
- 撤离托胎盘，然后踩下脚踏“ ”直至下胎缘脱离轮辋。撤离拆装臂，然后踩下脚踏“ ”松开卡爪，取下轮胎与轮辋，拆胎完成。

⚠注意：

在操作过程中，尽可能使手和身体其他部位远离运动件，佩戴项链、手镯及着装宽松的服装对操作人员来说是危险的！

4.2.2 安装轮胎

说明：

在安装轮胎之前，检查轮胎和轮辋尺寸是否相符。

- 按第三章所述装好轮胎的下胎缘。
- 如需要安装内胎，检查内胎是否受过损伤，然后将其套在轮辋上，(在整个安装过程中需要注意内胎的位置)。
- 为了安装上胎缘，重新放好轮胎，调整好胎缘位置（与安装下胎缘相同)。然后拉出压胎轮，使其端面距轮辋边缘约 1—2cm，再将压块置于拆装头顺时针方向约 20cm 的轮胎上缘，最后按下升降杆使压块下压 5—7cm，将胎缘压至轮槽以内（如图 25)。

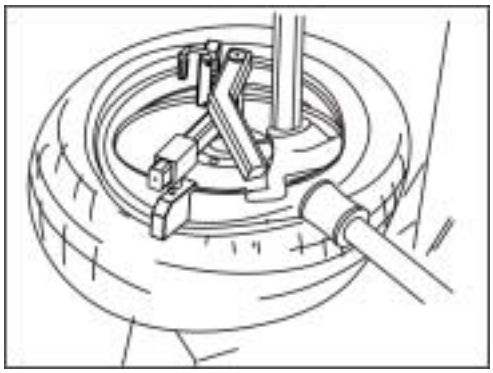


图 25

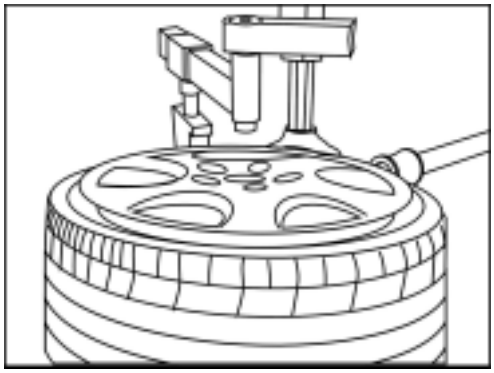
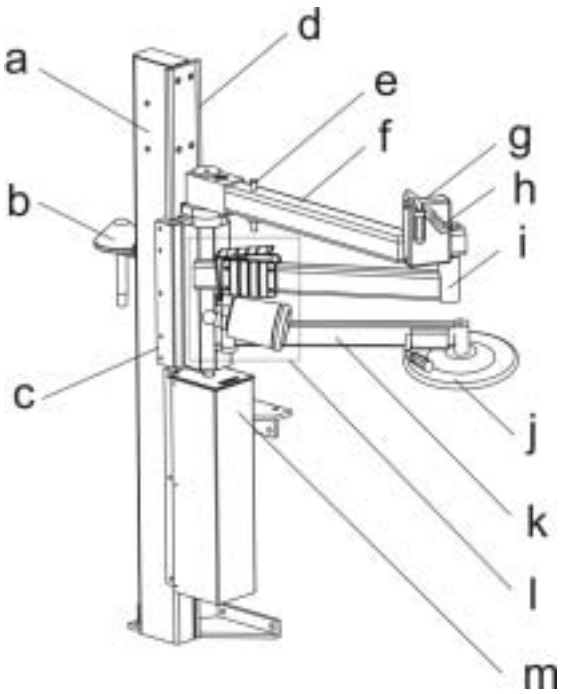


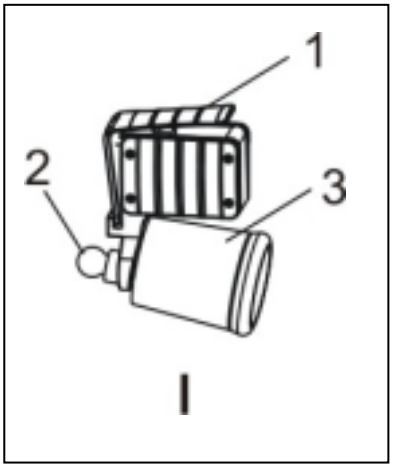
图 26

- 踩下转盘转向脚踏“ ”，让转盘顺时针转动。当还有 10—15cm（如图 26）的轮胎未装入时，动作要放慢并注意观察轮胎的状态以免撕伤轮胎。一旦感到轮胎有撕伤的迹象或电机停止转动。请立即松掉脚踏，然后用脚面抬脚踏“ ”使电机反转，使轮胎恢复原状以便再次进行。

第五章 TWC 系列左辅助臂说明

5.1 基本结构（如图 27）





a、辅助臂立柱 b、定位锥；c、滑板护罩；d、导轨；e、限位销；f、后转臂；g、控制盒；h、控制杆；i、前转臂；j、托盘；k、托盘臂；l、压胎轮；m、辅助臂气缸。

1、锁紧夹 2、球形螺母手柄 3、压胎轮

图 27

5.2 操作方法

⚠注意：

- 本辅助臂仅限于与元征 TWC－4、5、6 系列轮胎拆装机主机配套使用，切勿装在其他类型机器上面否则一切后果元征公司概不负责。
- 本辅助臂转臂组件具有自动定心功能，当后转臂移到中心时将会自动锁紧，上抬控制杆即解锁。

5.2.1 拆卸轮胎

- 将轮胎按第三章中所说的方法分离完后，借用辅助臂我们可以更简便的操作。
- 在选择轮辋外锁定方式时为了更方便的夹紧轮毂，借助辅助臂我们可以进行如下操作：先将卡爪张开一定范围（大于轮辋外围 2-3cm），再将车轮安置转盘上，拉出转臂，装上定位锥，并将定位锥对准车轮中心孔（如图 28），下压升降杆使轮辋贴近卡爪，最后脚踩脚踏“ ”将轮辋夹紧（如图 29），取下定位锥。

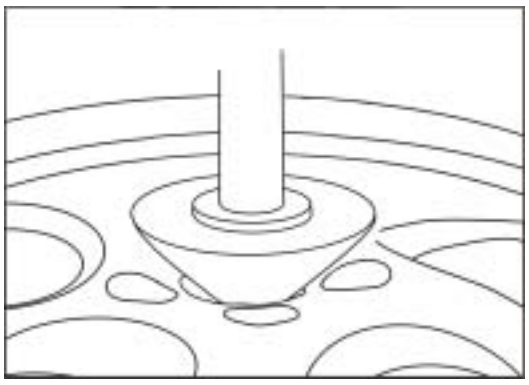


图 28

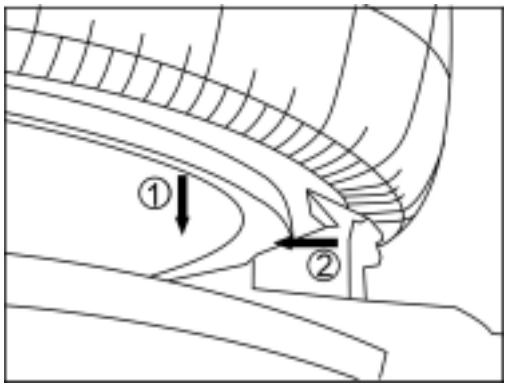


图 29

- 拉出转臂组件，将前转臂放至图 30 所示的位置并按图中步骤“ ① ”按下限位销将前转臂锁定在后转臂处，同时进行“ ② ”和“ ③ ”按下锁紧夹并将压胎轮移至离轮毂 2-3cm 处，然后执行“ ④ ”下压辅助臂控制杆将轮胎压至上轮毂以下 3－5cm 处，最后进行“ ⑤ ”拔出球形螺母手柄。

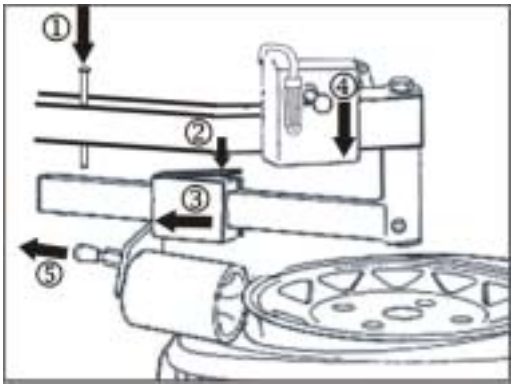


图 30

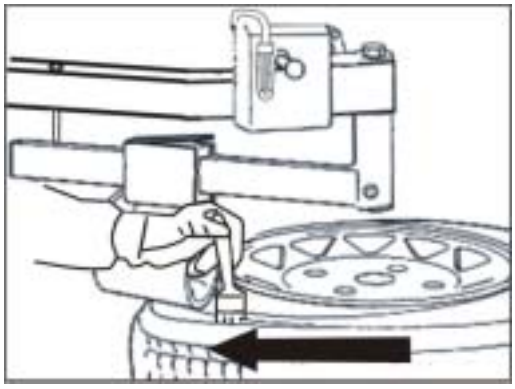


图 31

- 脚踩脚踏“ ”使转盘顺时针转动，同时用毛刷蘸取润滑剂涂抹于胎缘（如图 31）。
- 按照第三章的方法将拆装头放至合适位置并且锁紧。
- 将前转臂放至图 32 位置，拔出限位销“ ① ”再按下限位手柄“ ② ”，下压辅助臂控制杆“ ③ ”将轮胎压至上轮毂以下 3－5cm 处，将撬杠插进拆装头与胎缘之间“ ④ ”，然后上抬升降杆使压胎轮与轮胎脱离使其回位。
- 转动前转臂，将臂端压胎轮放于拆装头对面的轮胎上缘，然后下压升降杆使压胎轮下压 5—6cm，然后用撬杠将胎缘撬在拆装头上（如图 33）胎缘与拆装头的相对位置如第三章所述。

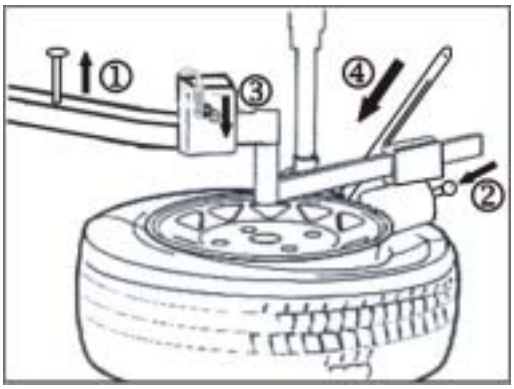


图 32

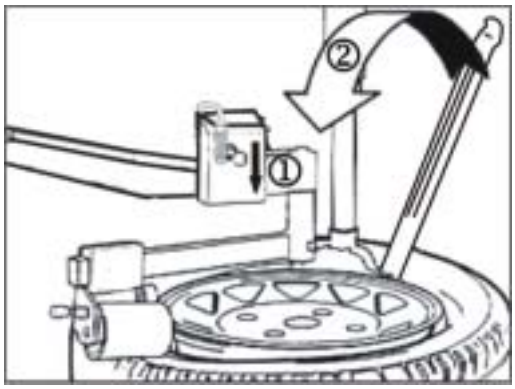


图 33

- 撤出压块使其回位，脚踩脚踏“ ”，让转盘顺时针旋转，直到胎缘脱落为止。如果有内胎，为了避免损坏内胎，在进行这步操作时，建议将轮胎气门嘴置于拆装机头右边 10cm 左右。
- 如果有内胎，先取出内胎。
- 拉出托胎盘，将盘壁贴近轮胎下缘；再将撬杠插入拆装头与轮胎的缝隙，并将其往轮辋方向压；将升降杆向上拨，上抬轮胎，而后使拆装头相对位置的下胎缘进入轮槽再将下胎缘撬到拆装头球型突起之上。（如图 34）
- 撤离托胎盘，然后踩下脚踏“ ”直至下胎缘脱离轮辋。撤离拆装臂，然后踩下脚踏“ ”松开卡爪，取下轮胎与轮辋，拆胎完成。

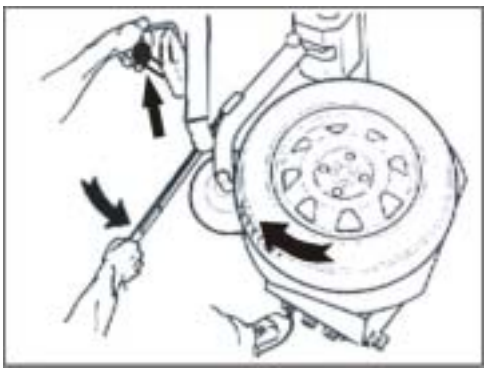


图 34

5.2.2 安装轮胎

⚠说明：

在安装轮胎之前，检查轮胎和轮辋尺寸是否相符。

- 按第三章所述装好轮胎的下胎缘。
- 如需要安装内胎，检查内胎是否受过损伤，然后将其套在轮辋上，(在整个安装过程中需要注意内胎的位置)。
- 为了安装上胎缘，重新放好轮胎，调整好胎缘位置（与安装下胎缘相同)。然后拉出压胎轮，使其端面距轮辋边缘约 1—2cm，再将压块置于拆装头顺时针方向约 20cm 的轮胎上缘，最后按下升降杆使压块下压 5—7cm，将胎缘压至轮槽以内（如图 35)。

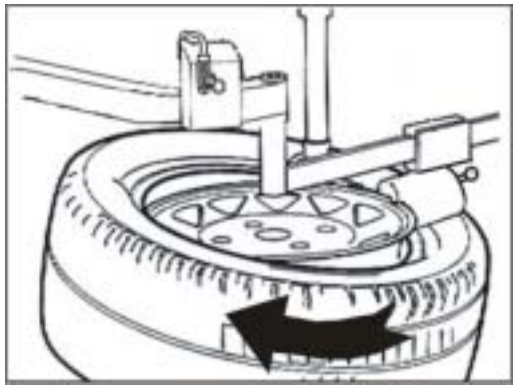


图 35

- 踩下转盘转向脚踏“ ”，让转盘顺时针转动。当还有 10—15cm 的轮胎未装入时，动作要放慢并注意观察轮胎的状态以免撕伤轮胎。一旦感到轮胎有撕伤的迹象或发现电机停止转动，请立即松掉脚踏，然后用脚面抬脚踏“ ”使电机反转，使轮胎恢复原状以便再次进行。

第六章　常见故障及排除方法

故障	可能的原因	排除方法
转盘只单向转动	◆ 万能转换开关损坏	◆ 更换万能转换开关
转盘不转动	◆ 皮带损坏 ◆ 万能转换开关损坏 ◆ 电机有问题 ◆ 皮带太松	◆ 更换皮带 ◆ 更换万能转向开关 ◆ 检查电机电源或接线盒电源接线 ◆ 若电机烧坏，更换电机 ◆ 调节皮带张紧力
转盘不能正确夹住轮辋	◆ 卡爪磨损 ◆ 转盘夹紧气缸漏气	◆ 更换卡爪 ◆ 更换气缸密封圈
四方横梁，六方杆锁不住	◆ 锁板松动 ◆ 锁紧气缸漏气	◆ 调整螺钉下旋 ◆ 更换气缸或加强密封
四方横梁推拉不灵，六方杆不能上下运动	◆ 四方型锁紧板位置不对 ◆ 六方型锁紧板位置不对	◆ 按维修保养中的说明进行调整
立柱后仰或回位速度过快或过慢	◆ 立柱气缸排气量过小或过大 ◆ 进气源未达到 8bar	◆ 打开侧板，用手微调立柱气缸节流阀，使其达到动作平衡，然后将盖帽拧紧
按下手柄锁紧按钮后，锁紧气阀不通气	◆ 气阀胶圈损坏 ◆ 调压阀有问题	◆ 更换气阀或胶圈 ◆ 重新调节气压 ◆ 更换调压阀
踩下脚踏后，脚踏不能回位	◆ 脚踏回位弹簧损坏	◆ 更换脚踏回位弹簧
传动部分声音异常	◆ 电机位置紧固螺钉松动 ◆ 有异物进入传动系统	◆ 旋紧紧固螺钉 ◆ 排除异物
电机不转或输出力矩不足	◆ 传动部位卡死 ◆ 电容击穿 ◆ 电压不足 ◆ 断路	◆ 排除卡点 ◆ 更换电容 ◆ 暂停工作等待恢复 ◆ 排除
气缸输出力不足	◆ 漏气 ◆ 机械障碍 ◆ 气压不足	◆ 加强密封 ◆ 排除机械障碍 ◆ 更换压缩机
漏气	◆ 气管损坏 ◆ 接管嘴损坏 ◆ 密封胶流失	◆ 更换相应零件 ◆ 加胶

第七章　维修与保养

⚠注意：

只有专业人员才可进行维修工作。在进行任何维修保养的工作之前，应断开电源并使电源插头在维修人员的监控范围之内，同时关掉气源并将气体开关推到关闭（Off）位置且踏 3-4 下夹紧气缸脚踏，排尽机器内余留压缩空气。

为正确使用拆装机和延长其使用寿命，按说明书要求定期维修和保养是很有必要的，否则机器的运行和可靠性将受到影响，并可能使操作者或机器附近的人员受到伤害。

- 保持机器及工作区域的干净，以避免灰尘进入运动部件。
- 保持六方杆的干净（用柴油清洁，如图 36）和润滑。
- 保持四方横梁 Q 的干净，定期润滑，使其能够推拉顺畅。
- 每周用柴油清洁转盘并润滑卡爪及其导轨（如图 37），并使其保持干净。
- 每周清洁、润滑方立柱底转轴。

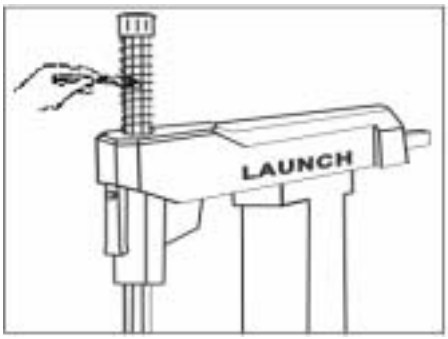


图 36

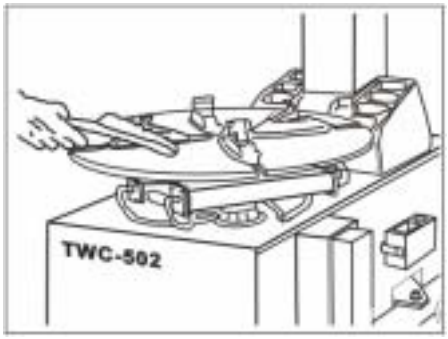


图 37

- 每周应使用锂基脂类的油品（参数见附录）进行润滑所有相互产生位移的结合面和相互摩擦的结合面。
- 定期检查油雾器中润滑油的高度，保证其油位不能低于第二道红线，否则用 SAE20 号油充满。（如图 38）。
- 定期检查油杯附近空气净化器内的凝结物。当水和杂质累积量超过红线标志时，旋开下面的放水钮然后用手指上压以将水和杂物排出。
- 定期检查并调节传动带的张紧力。
- 定期检查所有的连接部分并拧紧松动螺栓。
- 定期检查并调整六方杆的锁紧处，以保证六方杆锁紧后拆装头内侧与轮辋的距离（正常 2～3mm）。

⚠注意：使用机器 15 天左右，重新紧固转盘上的连杆螺栓 A（如图 39）。

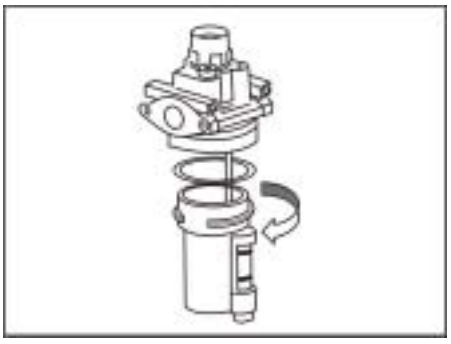


图 38

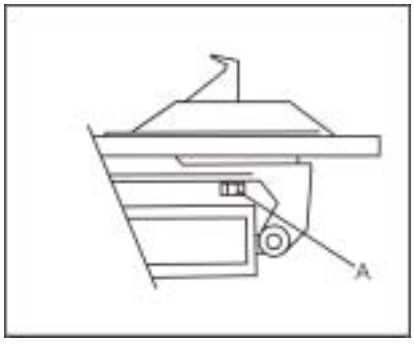


图 39

六方杆锁紧后上、下串动量过大，可按以下步骤进行维修：

- 关闭气源。
- 卸下六方杆防护罩。
- 用扳手调整调节杆处的止动螺母或锁紧板前端的顶丝。
- 接通气源观察锁紧后的位置即可。

四方横梁推拉不顺畅或锁紧时前后串动量过大，可按以下说明进行维修：

- 打开方立柱防护盖。
- 用扳手调整两端的 M6 螺钉，同时用手推动四方横梁直至其推拉顺畅，而后将螺母锁紧。
- 用扳手调整中间的螺钉，同时锁紧四方横梁，观察其变化，直至前后串动量满足要求，而后将螺母锁紧。

定期清洁转盘上的卡爪开/合控制阀及分离铲的控制阀，以保证它们正常工作：

- 松开机身左边侧板的螺钉，拆下侧板。
- 松开卡爪开/合控制阀及分离铲控制阀上的消声器，用压缩空气清除消声器上的污物（如图 40）。

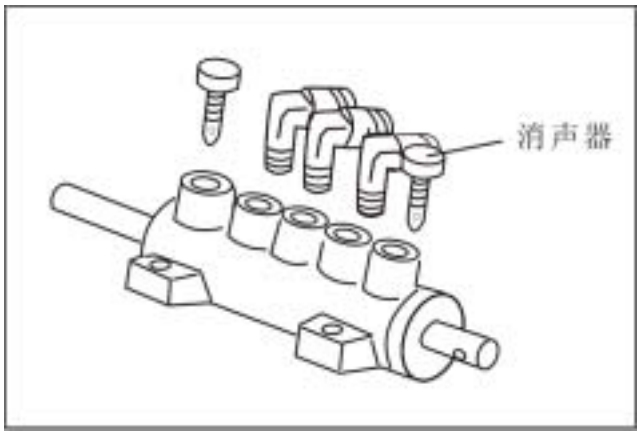


图 40

第八章　数显充气机

8.1 性能：

- 电脑计量，读数精确，充气时间短。
- LED 显示，测试结果清晰明了，适用于夜晚和室内外。
- 测气压、充气同时完成，快捷方便。
- 可预先设定轮胎要求充、放气值，气枪插入轮胎(非空轮胎)后，本设备会自动测试，并能判别充气还是放气。当轮胎内气压达到设定值，自动停止，发出蜂鸣声予以提醒。当轮胎是空胎时，按“ RUN/STOP ”键，就能自动充至预置值。
- 在充、放气时，可暂停工作。
- 该设备具有气压单位转换功能，可显示 Bar 单位值，也可显示 Psi 单位值。
- 产品设计美观大方，安装方便。

8.2 技术参数：

- 工作范围：0~8Bar　(0～116Psi)
- 精度：0.1Bar(1.45Psi)
- 外接气源：气压 6~9Bar(87~130Psi)
  流量>0.2M^3/min
- 充气速度：0.15 M^3/min
- 交流电源：按照客户所在地区进行电源配置
- 工作温度范围：-10℃—+50℃
- 湿度：<95%
- 功耗：20W
- 净重：5Kg
- 尺寸：120×195×100mm

8.3 使用注意事项：

1．电源线须有接地连接。
2．充气机的管线连接见图 23、24。
3．本系列产品不附有气源，外加气源气压控制在 9.5Bar 以下，若外加气源超过 9.5Bar，可在输入气管串接一个减压阀，使进入充气机气压在 9.5Bar 以下。
4．压缩空气须经油水分离器（气源三联件）后再接入充气机，以免设备内元件受到腐蚀。
5．本设备自带 9 米充气管。若需加长充气管时，充气管总长度不得超过 20 米。否则，会造成工作精度下降，甚至设备无法正常工作。
6．本设备开机时，气枪头应放空不接轮胎，让设备在开机时正确测得零点气压，这才能保证精度。
7．在使用时应保证充气枪与轮胎连接可靠，无漏气现象。
8．本产品使用时，其电源要远离大功率用电设备，大功率设备启动和关闭会偶然干扰本设备。当交流电源出现瞬间断电干扰时，设备内电脑有时会出现异常错误，只要拔下气枪头，重新断接一次电源即可。
9．单位换算：　1Mpa=l0Bar
　　1Bar=14.5Psi
　　1Bar≈1Kg/cm^2

8.4 操作说明：

1、 本设备以“ bar（b）”为计量单位，按“ bar/psi ”键可转换成“ psi（p）”单位显示。
2、 根据轮胎的技术指标选择正确的压力。按“ + ”键或“ ー ”键设定符合轮胎技术要求的压力值。
3、 压力值设定好后方可将充气枪夹头与轮胎连接。若轮胎中有气压，设备将自动运行；若轮胎是空胎，需按一下“ RUN/STOP ”键方可运行。
4、 当设备工作时按“ RUN/STOP ”键可暂停工作，再按“ RUN/STOP ”键可继续工作。
5、 当轮胎内压力达到设定压力值时，蜂鸣器将发出鸣响，工作结束。

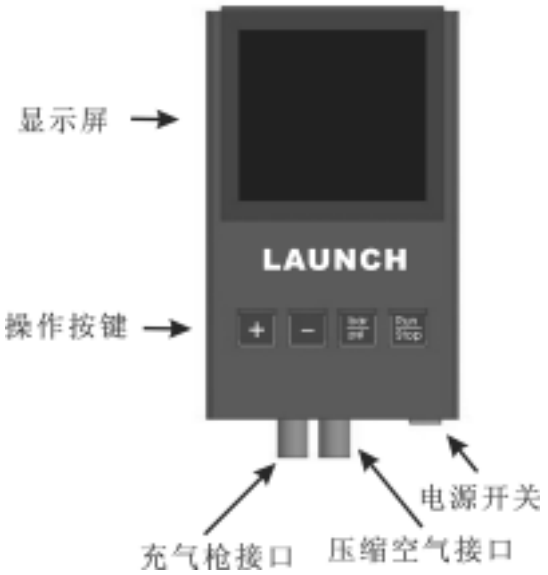


图 41

8.5 电气原理图

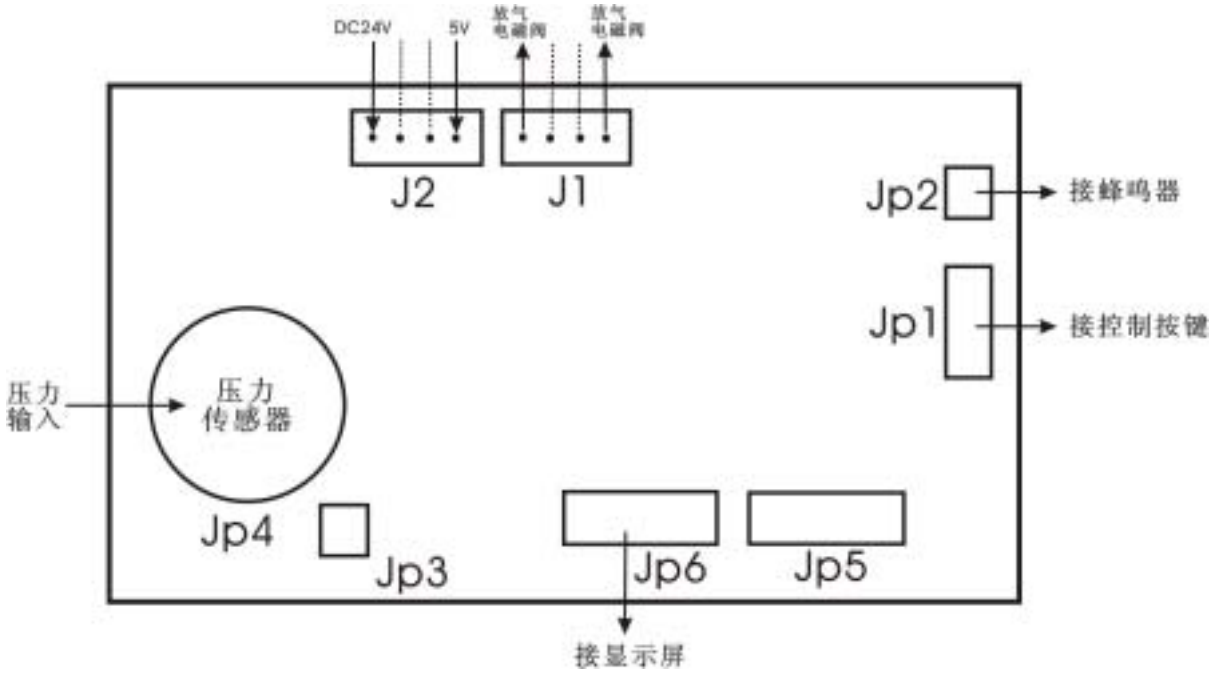


图 42

第九章　贮存与报废

9.1 贮存

当设备需长时间贮存时。

- 拔掉电源和气源。
- 润滑所有所需润滑的部件：滑块、转台上的滑块槽等。
- 倒空所有的油/液体贮存器。
- 将设备套上塑料罩以防尘。

9.2 报废

当设备寿命已尽不能再使用时，应拔掉电源和气源，并按照当地有关法规妥善处理。

TWC 系列机用油脂安全数据表

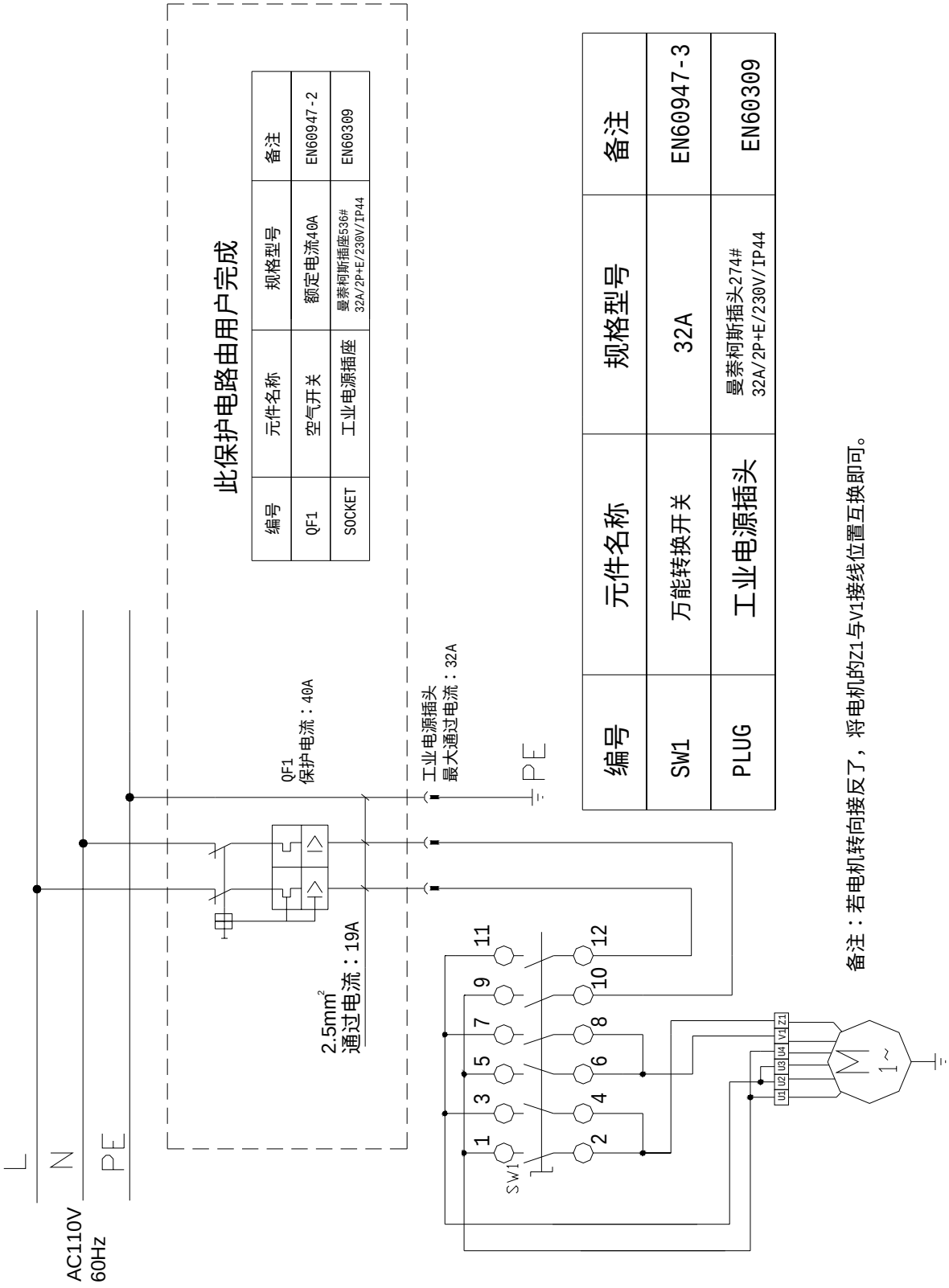
2 号锂基润滑脂

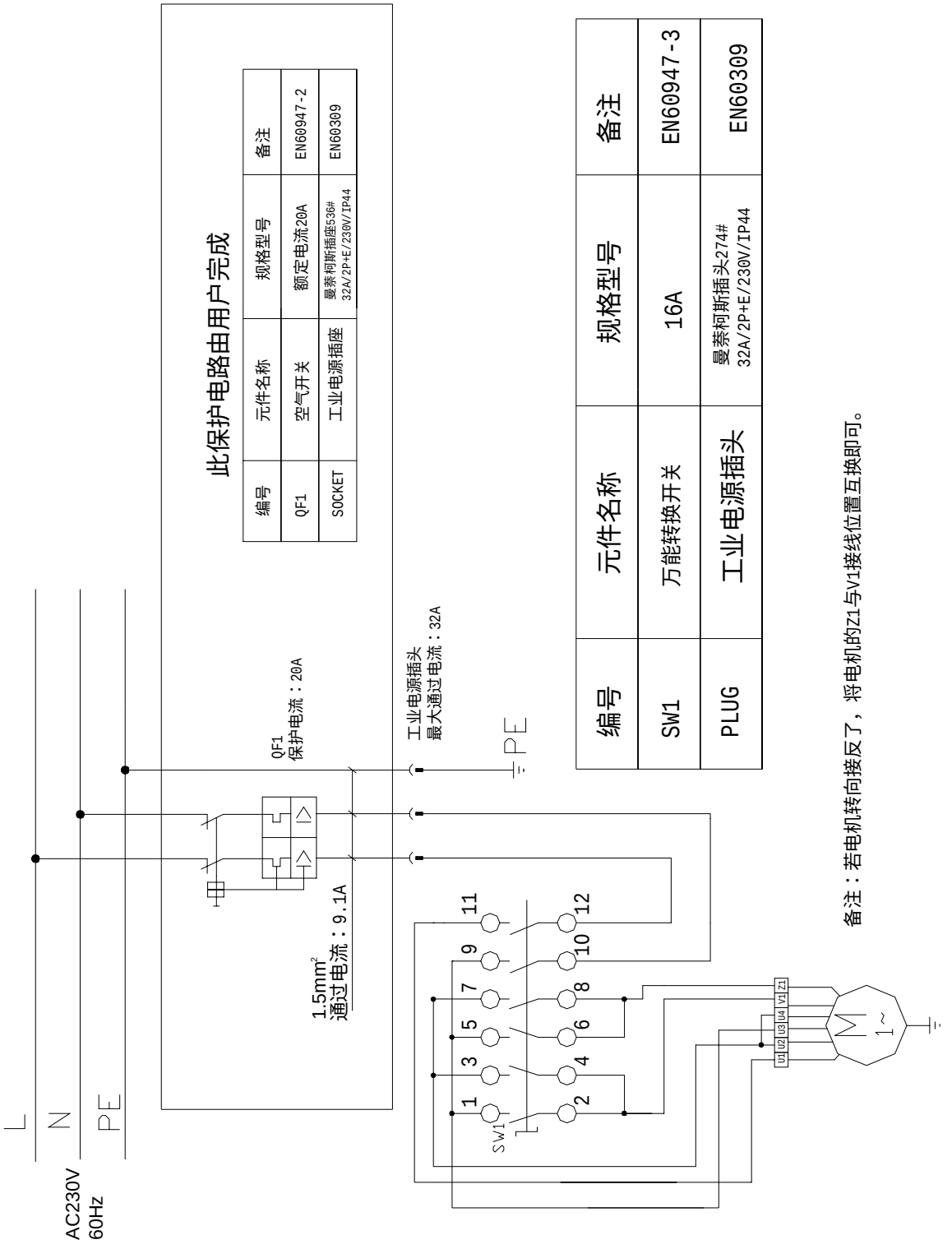
项目	质量指标
锥入度（1/10mm）	278
滴点℃	185
腐蚀（T2 铜片，100 ℃，24h）	铜片无变化
铜网分油（100℃，22h）%	4
蒸发量（100℃，22h）%	2
氧化安定性（99℃，100 h）	0.2
防腐蚀性（52℃，48）	1 级
杂质（显微镜法）/（个/cm3） 10μm 以上 不大于 25μm 以上 不大于 75μm 以上 不大于 125μm 以上 不大于	 5000 3000 500 0
相似粘度（-15℃，$10s^{-1}$），/(Pa · s) 不大于	800
水淋流失量（38℃，1h）(%) 不大于	8

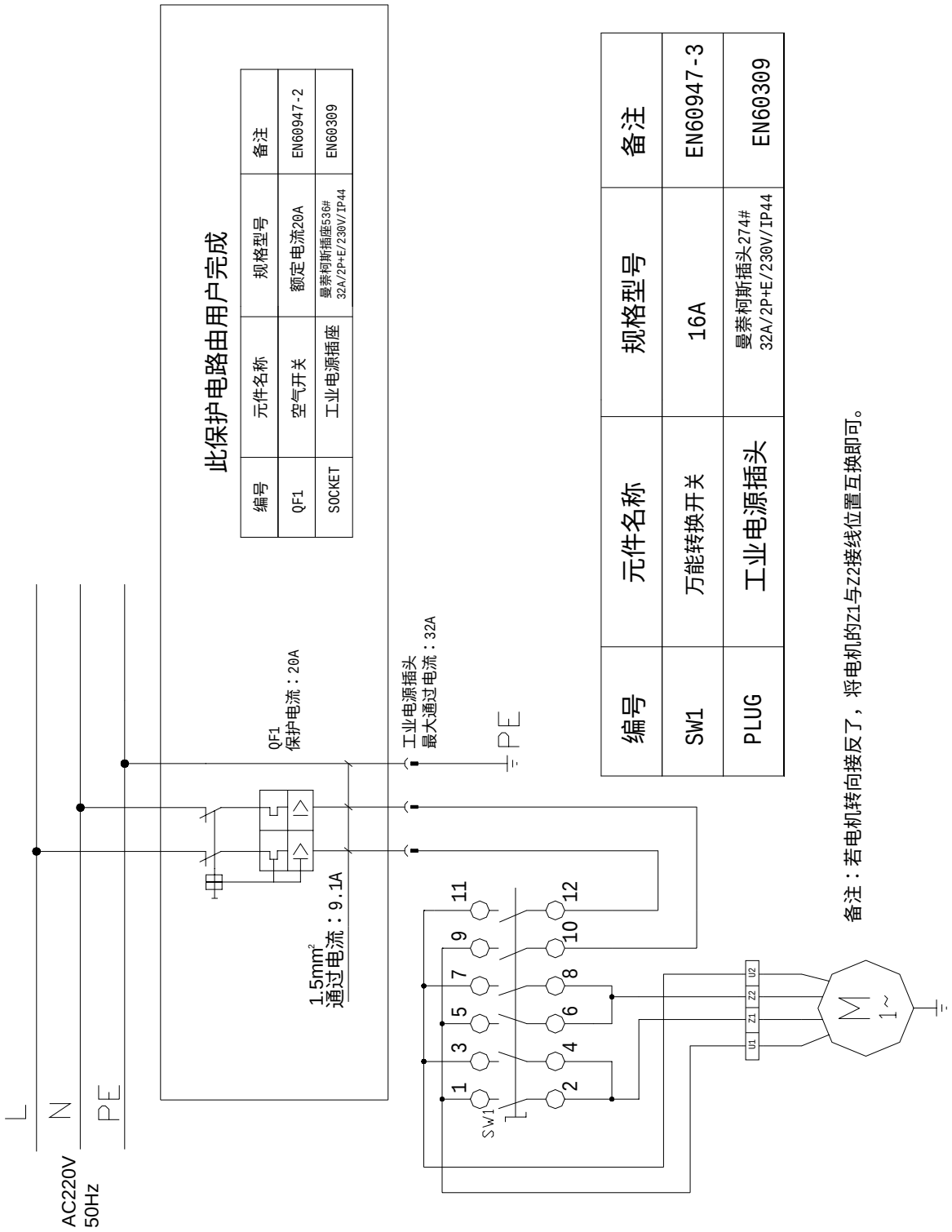
SAE20 号润滑油

项目	质量指标
密度（15℃）	0.880
闪点℃	213
凝点℃	-21
粘度 40℃	66.2
粘度 100℃	8.2
粘度指数	95

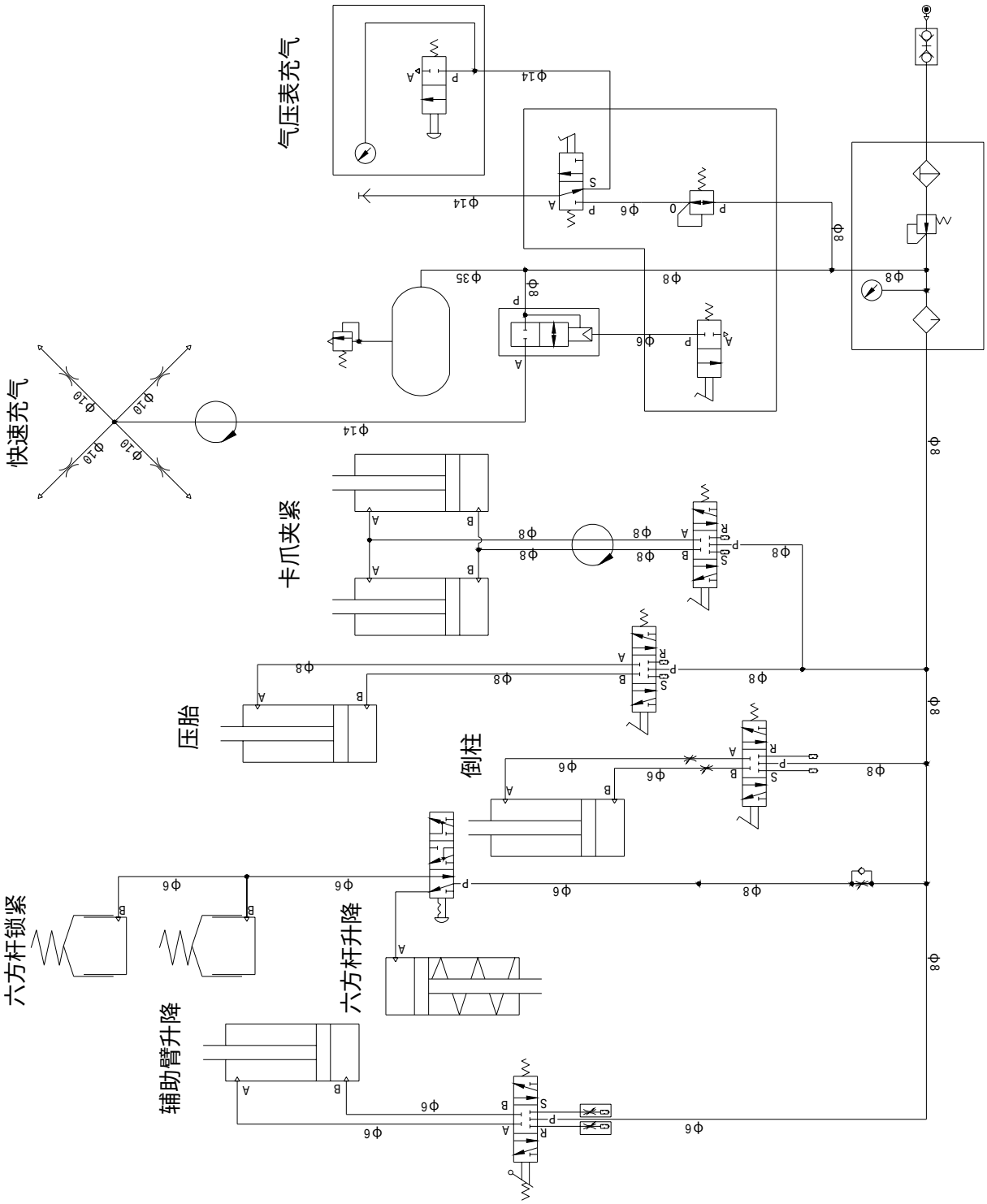
TWC 系列电路图


此保护电路由用户完成
编号 元件名称 规格型号 备注
QF1 空气开关 额定电流40A EN60947-2
SOCKET 工业电源插座 曼萘柯斯插座536# 32A/2P+E/230V/IP44 EN60309
编号 元件名称 规格型号 备注
SW1 万能转换开关 32A EN60947-3
PLUG 工业电源插头 曼萘柯斯插头274# 32A/2P+E/230V/IP44 EN60309
L
N
PE
AC110V
60Hz
QF1
保护电流：40A
2.5mm²
通过电流：19A
工业电源插头
最大通过电流：32A
PE
SW1
1 2 3 4 5 6 7 8 9 10 11 12
U1 U2 U3 U4 V1 Z1
1~
备注：若电机转向接反了，将电机的Z1与V1接线位置互换即可。


此保护电路由用户完成
编号 元件名称 规格型号 备注
QF1 空气开关 额定电流20A EN60947-2
SOCKET 工业电源插座 曼泰柯斯插座536# 32A/2P+E/230V/IP44 EN60309
L
N
PE
AC230V
60Hz
QF1
保护电流：20A
1.5mm²
通过电流：9.1A
工业电源插头
最大通过电流：32A
PE
SW1
1 2 3 4 5 6 7 8 9 10 11 12
U1 U2 U3 U4 V1 Z1
1~
编号 元件名称 规格型号 备注
SW1 万能转换开关 16A EN60947-3
PLUG 工业电源插头 曼泰柯斯插头274# 32A/2P+E/230V/IP44 EN60309
备注：若电机转向接反了，将电机的Z1与V1接线位置互换即可。


此保护电路由用户完成
编号 元件名称 规格型号 备注
QF1 空气开关 额定电流20A EN60947-2
SOCKET 工业电源插座 曼萘柯斯插座536# 32A/2P+E/230V/IP44 EN60309
L
N
PE
AC220V
50Hz
QF1
保护电流：20A
1.5mm²
通过电流：9.1A
工业电源插头
最大通过电流：32A
PE
SW1
1 2 3 4 5 6 7 8 9 10 11 12
U1 Z1 Z2 U2
M
1~
编号 元件名称 规格型号 备注
SW1 万能转换开关 16A EN60947-3
PLUG 工业电源插头 曼萘柯斯插头274# 32A/2P+E/230V/IP44 EN60309
备注：若电机转向接反了，将电机的Z1与Z2接线位置互换即可。

TWC 系列气路图



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Safety Precautions

Attention

- This manual is a necessary part of the product. Please read carefully.
- Keep the manual for later use when maintaining the machine.
- This machine can only be used for the designated purposes. Never use it for any other purpose.
- The manufacturer is not held responsible for the damage incurred by improper use or use other than the intended purpose.

Precautions

- The equipment can only be operated by qualified personnel with special training. Modification to any components or parts, or use the machine for other purpose without either obtaining the agreement from the producer, or observing the requirement of the instructions may lead to direct or indirect damage to the equipment.
- The machine should be installed on the stable ground.
- Keep the back panel 0.75M away from the wall for good ventilation. Enough room should be left on both sides of the machine for convenient operation.
- Do not put the machine in a place with high temperature or moisture, or near the heating system, water tap, air-humidifier or chimney.
- Do not put the machine near the window with sunlight. Protect the unit with a curtain or shield if necessary.
- Avoid lots of dust, ammonia, alcohol, thinner or spraying binder.
- People who are not operating the machines should be kept away when it is used.
- Use appropriate equipment and tools, protective and safety equipment, including eyeglasses, earplugs and working boots.
- Pay special attention to the marks on the machine.
- Do not touch or approach the moving parts by hand during operating.
- Do not remove the safety device or keep it from working properly.
- Use #2 lithium lubricants (grease) only within the safety range. Refer the appendix for the safety data.
- Before moving the tyre changer, contact maintenance personnel.

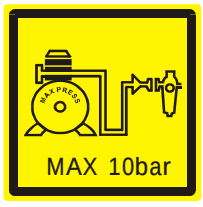
Description of Safety Signs

- Caution should be taken when separating the tyre bead from rim. The bead breaker shoe will move rapidly and forcefully when the pedal is depressed. Keep hands and other parts of body away from moving parts.

- If the clamping cylinder is working when bead breaking, to avoid squeezing hands, remember to keep hands away from the sidewalk of tyre.

- High voltage power! Danger!

- This is where the compressed air gun is connected with the air pipe. Connect the compressed air gun with the air connector.



- The pressure of the compressed air should not exceed 10 bar.

- To prevent accidents from occurring, make sure to keep hands and other parts of the body away from moving parts when fastening the mounting head or when the turntable is running.

- Be careful when connecting and disconnecting air source. Exhaust the air in the cylinder completely when maintaining the air pipes to prevent accidents from occurring.

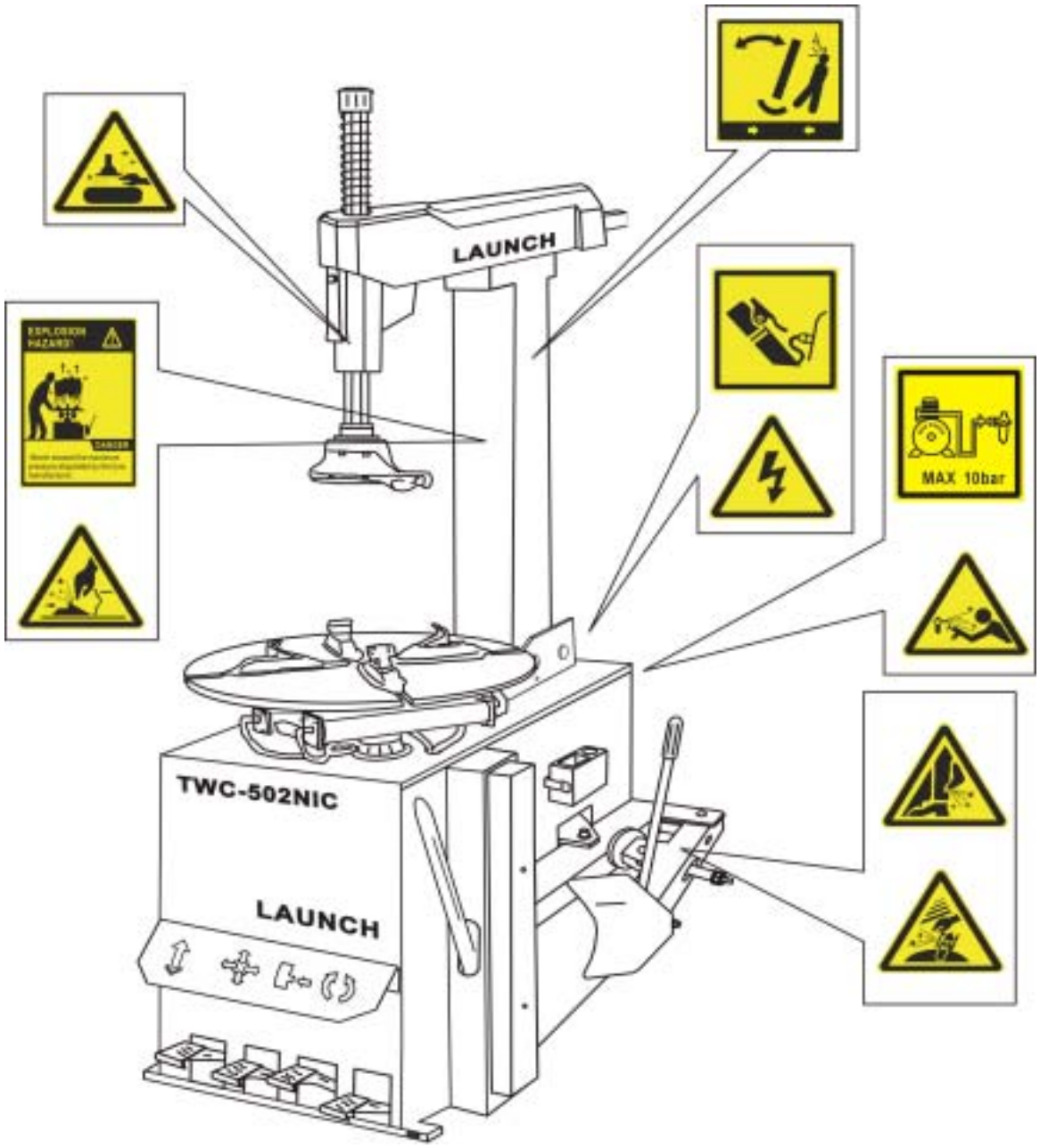
- Don't keep hands or other body parts between the clamping jaw and clamping rim.

- Pay attention to the safety regulations in the swinging area of the tilting post to avoid accidents from happening.

- Before inflating check if the clamping rim and the tyre match each other, and if they are in good condition. Any negligence may result in fatal explosion. Similar accident may occur if the inflating air exceeds the allowed tire pressure.

The Position of Safety Signs

Take TWC-502NIC as example:



- Please replace the safety signs if it gets blurred or lost.
- When one or more safety signs get lost, don't operate the machine.
- The safety signs must be kept within the sight of the operator.

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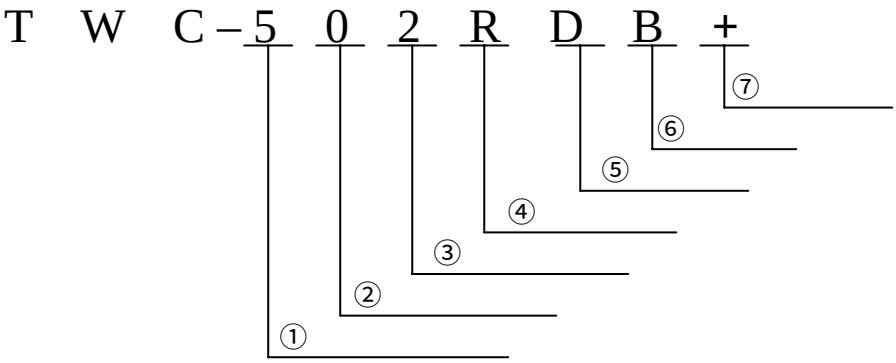
General Information

Rules to name TWC series

TWC- means tyre changer



Meaning of code:

①- for rim clamping diameter: 4 stands for 10" ～19"(20");
5 stands for 10" ～23"(24");
6 stands for 10" ～26";

②- for shape of turntable: 0 stands for round turntable;
1 stands for square turntable;
2 stands for cross turntable;
3 stands for asymmetric turntable;

③- post working mode: 1 stands for swing arm (semi-automatic);
2 stands for tilting arm(automatic);
3 stands for swivel arm (automatic)

④- for supplementary arm information: R stands for right supplementary arm;
L stands for left supplementary arm;
D stands for double supplementary arm;
N stands for none supplementary arm;

⑤- for inflating device: I stands for inflating gun;
M stands for meter inflating box;
D stands for digital inflating gauge (LED display);

⑥- for inflating mode: B stands for quick inflator;
C stands for normal inflating;

⑦- for roller set: + stands for roller set;

For example:

TWC-502RDB+--------- the tyre changer's rim clamping diameter is 10"-23"(24"). It is equipped with round turntable, tilting post(automatic), right supplementary arm, digital inflating box(LED display), quick inflator and roller set.

Usage

TWC series are used for demounting, mounting and inflating tyres of small and medium vehicles. Mount/demount help device and quick-inflating device features simple operation and high reliability. In addition, it can also be a great help in car repair garage and tyre dealers.

Features

- Integrate demounting, mounting and inflating, wide rim diameter capacity
- The steel mount/demount is cast from excellent alloy material with special shape and durable performance. The supplied plastic mount/demount head with the equipment is made from special engineering plastic that has enough intensity and will not damage the tyre or the rim.
- The two clamping cylinder ensures accurate central alignment, so that the rim can be held tightly.
- Pedal set designed for ergonomical use
- With adjustable opening, bead breaker is suitable for tyres of different sizes
- Tyre lever and lubricant box within the reach of operator technical specifications

Technical data

Model	Height	Length	Width	Weight
TWC4*1**	1705mm	1020mm	810mm	204kg
TWC4*2**	1725mm	1020mm	810mm	218kg
TWC5*1**	1820mm	1015mm	870mm	228kg
TWC5*2**	1880mm	1350mm	950mm	320kg
TWC6*2**	1880mm	1350mm	950mm	340kg

Electric specifications

Voltage alternatives:

A C110V(±5%) 60Hz （±1Hz）

AC220V(±5%) 50Hz （±1Hz）

AC230V(±5%) 60Hz （±1Hz）

Power: 1.1Kw

Phase: Single

RPM of turntable: 6－8r/min

Air supply

Working pressure: 8-10bar

Bead breaker force: 14075N

Noise

Working noise: <70dB(A)

Applicable Range

Model	Max wheel diameter	Max rim width
4 series	960mm(38")	360mm(14")
5 series	960mm(38")	380mm(15")
6 series	1050mm(41")	380mm(15")

Working conditions

Working temperature: -40°C－45°C

Transport/store temperature: -40°C－55°C

Humidity: 30－95%

Altitude: less than 1000m

Main Structure

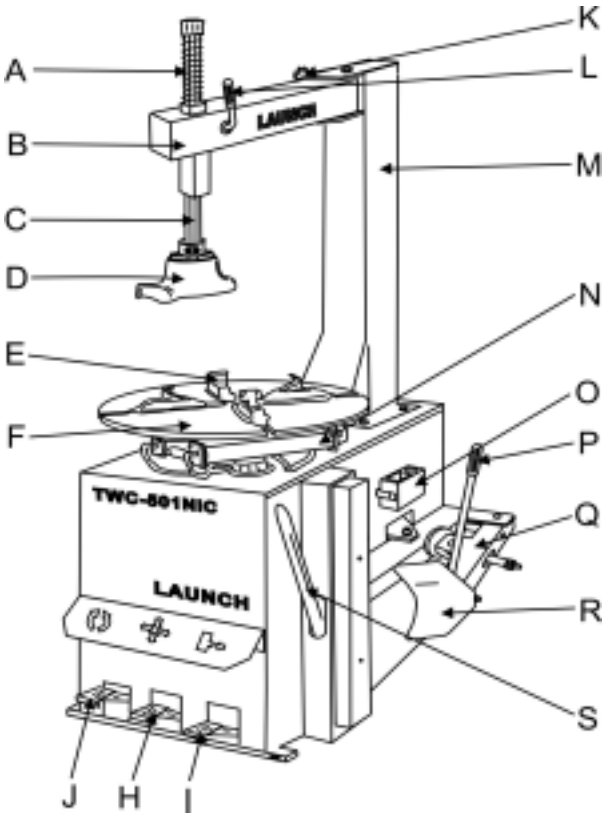


Fig.01-1

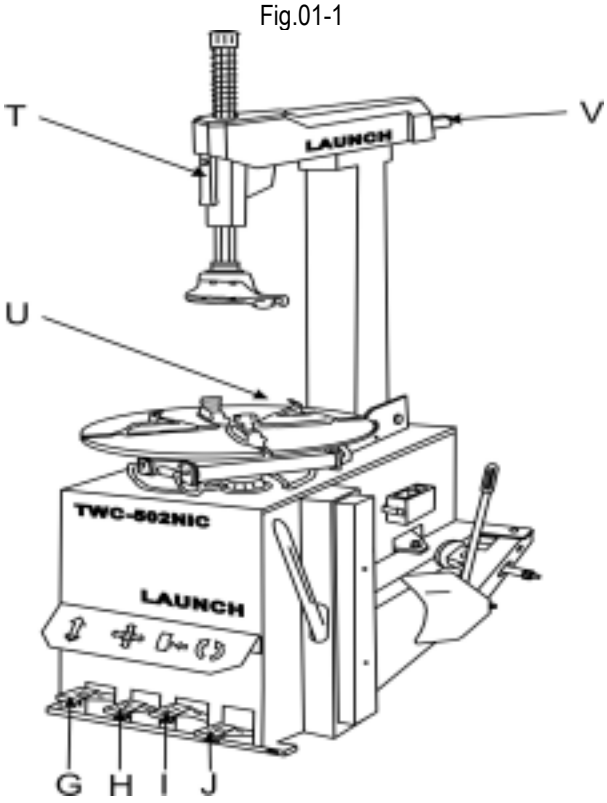


Fig.01-2

The main structure is shown in Fig. 01.

A. Return spring
B. Swing arm
C. Hexagonal column
D. Mount/demount head
E. Clamping jaw
F. Turntable
G. Tilting post control pedal
H. Clamping cylinder control pedal
I. Bead breaker control pedal
J. Turntable control pedal
K. Knob
L. Locking lever
M. Post
N. Clamping cylinder
O. Lubricant box
P. Bead breaker handle
Q. Bead breaker arm
R. Bead breaker shoe
S. Tyre lever
T. Locking handle
U. Air pressure regulator, gauge and lubricator assembly
V. Horizontal arm.

Accessories provided are shown in Fig.02

001-Tyre lever

002-Brush

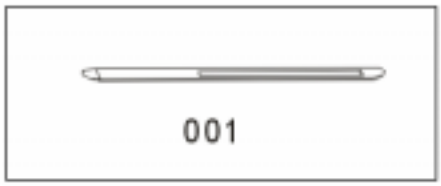


Fig.02-a

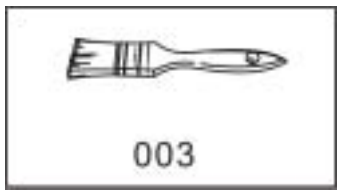


Fig.02-b

Operation

Attention:
The machine is only to be operated by specially trained and authorized personnel. Use appropriate equipment, tools and personal protective equipment, such as eye-glasses, ear-plugs and working boots, when operating the tyre changer. Make sure that the power, air sources and the oil level in the oil cup are in accordance with the requirements.

General Regulations

- To avoid damage when mounting and demounting tyre, especially the alloy ones, use the tyre lever offered by manufacturer.
- For easier demounting and better protection of the tyre and rim, lubricate the area between the rim and tyre bead, where the bead breaker shoe goes in, with industrial lubricant or thick soap solution.
- Pay special attention to rotary direction marked on some flanges or tyres.
- Fit the tyre on the rim of matched size.
- Check for damages (distortions, surface damages, excessive runout, erosion or overall wear) before demounting.
- Never ignore the mounting and demounting requirements of the special wheel.
- When inflating the tyre, make sure the pressure increases in an even way. Pay attention to status of the tyre bead.

Demounting Tyre

Preparing

- Deflate the tyre thoroughly.
- Remove all the foreign substance and weights from the rim (Fig. 03).

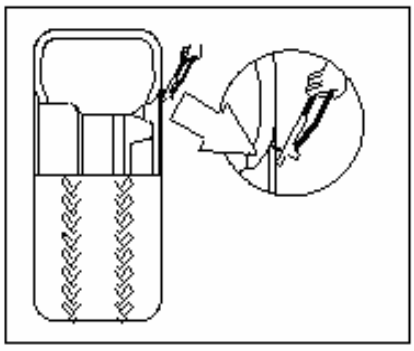


Fig.03

Demounting

Attention:

Lubricate the bead with a brush dipped in soap solution before bead breaking in order to protect tyre bead from wear. (Fig. 04).

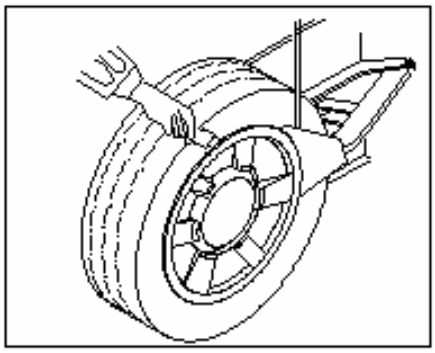


Fig.04

- Place the tyre between the bead breaker shoe and rubber pad and position the bead breaker shoe max 1 cm away from the rim flange (Fig. 05). Depress pedal " " to unseat bead from rim.
- Repeat the above steps to unseat bead thoroughly from the rim.
- Place the wheel on the turntable. For the asymmetric deep groove rim, keep the narrow rim upward.
- Depress pedal " " to the end to clamp the rim.

Attention: Different types of clamping can be chosen in accordance with different rims.

- *In case of inward clamping, shrink the jaws together, place the wheel on the turntable and depress pedal to clamp.*
- *In case of outward clamping, enlarge the jaws outward (2-3cm away from periphery of the rim) and place the wheel on the turntable. and depress pedal to clamp it (Fig. 06).*

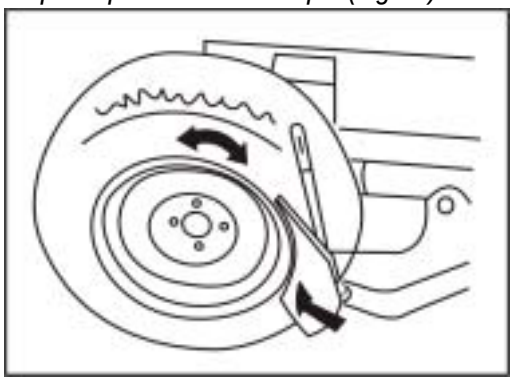


Fig.05

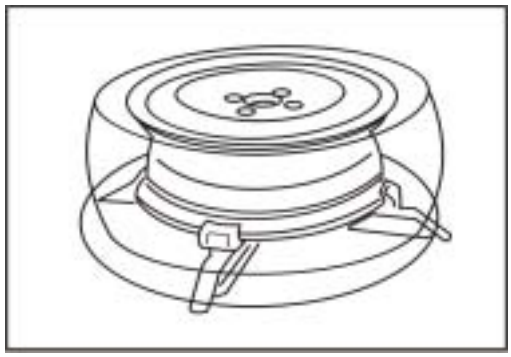


Fig.06

Tyre changer with swing arm:

- Pull back the swing arm(3, fig.07) to working position, adjust hexagonal column(4) up and down to make mount/demount head 1-2 mm away from rim flange to protect rim(fig.09), turn knob (12)to lock swing arm, and turn locking handle(2) clockwise to lock hexagonal column.

Tyre changer with tilting post:

- Depress pedal " " to restore the tilting post to its working position (Fig.08).
- Press the hexagonal column and adjust hexagonal column and horizontal arm to make mount/demount head 1-2 mm away from rim flange to avoid scratching rim(fig.09). Press button (a) (fig.08) on the locking handle to lock the hexagonal column.

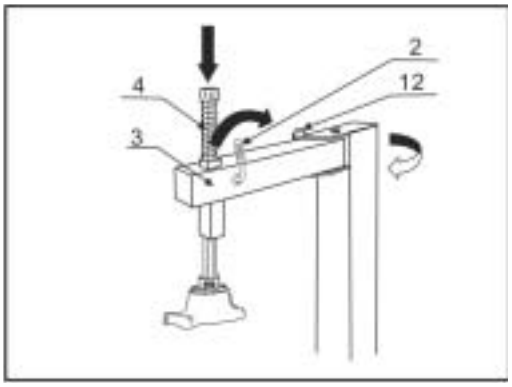


Fig.07

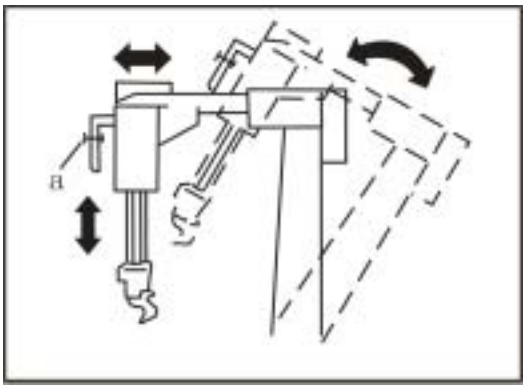


Fig.08

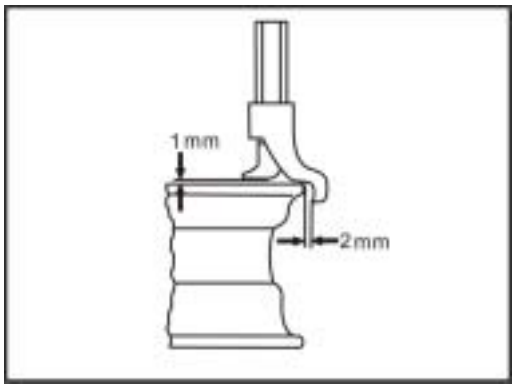


Fig.09

Attention:

The angle of the mount/demount head has been adjusted by manufacturer according to standard rim (15"). Re-adjustment may be necessary to prevent scratching the tyre when the rim is extremely large or small.

Lift the tyre bead onto the demount/mount head with tyre lever(to make it easy, press down the tyre opposite to the mount/demount head)(fig.10) Depress pedal " " to turn the turntable clockwise until bead is unseated. To avoid damage to the tube when where is one, it is advisable to place the air inflating valve about 10 mm(fig.11) away from the mount/demount head.

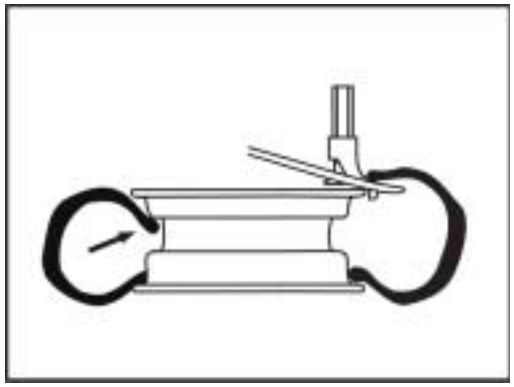


Fig.10

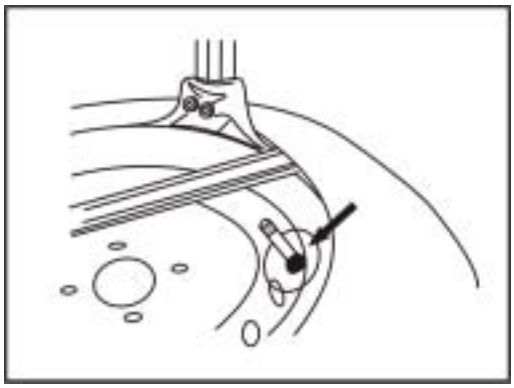


Fig.11

Caution:

In case the demounting is hindered, stop the machine immediately. Lift up the pedal " " to turn the turntable counter-clockwise to clear away the hindrance.

- If there is tube in the tyre, remove it first.
- Lift the lower tyre bead so that the rim at the relative side enters the groove(fig.12), use tyre lever to lift the lower bead onto the mount/demount head.
- Depress pedal " " to separate the lower bead from rim.
- Depress pedal " " to loose the jaw to take the rim off.

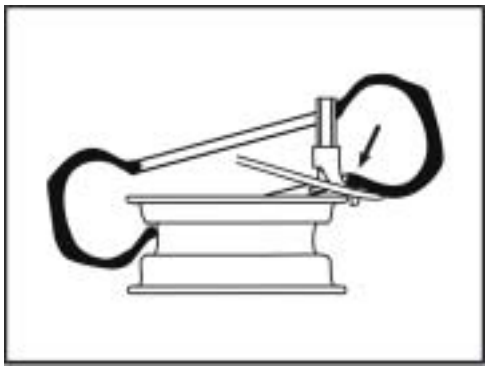


Fig.12

Caution:

Keep hands and the rest of human body away from the moving parts of the machine. Never wear necklace, bracelet or loose clothes when operating the machine as it may cause danger!

Mounting tyre

Attention:

Check the size of tyre and rim to see if they match each other.

- Clamp the rim tightly in the same way as demounting tyre.
- Use lubricant such as thick soap solution on the tyre and the rim.

Tyre changer with swing arm:

- Place the tyre onto the rim at an angle to the turntable, left side higher, pull back the swing arm in working position.

Tyre changer with tilting post:

- Place the tyre onto the rim at an angle to the turntable, front side higher(fig.13), depress down pedal " " to restore the post (fig.13), adjust the mount/demount head to right position, finally, press locking button.

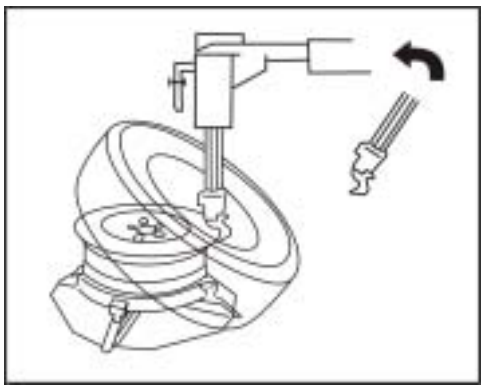


Fig.13

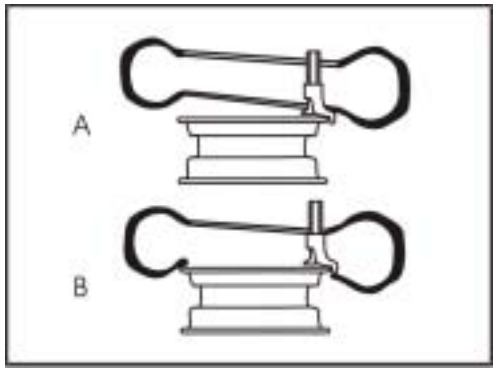


Fig.14

- Adjust relative position between the tyre and the mount/demount head to position the tyre bead above the left lip of the head (fig.15A) and below the right lip(fig.15B).

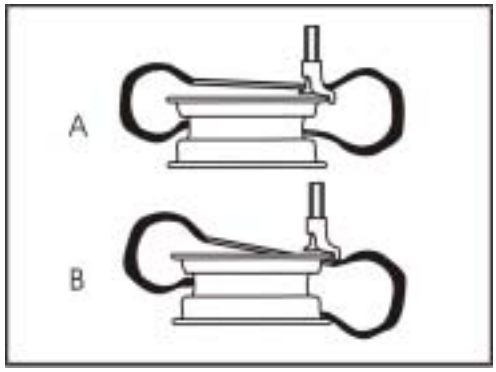


Fig.15

- Press down the sidewall of the tyre. Depress the pedal " " to turn the turntable clockwise, making the lower tyre bead fall into the rim groove completely.
- If a tube needs to be installed in the tyre, check first for the possible damages. Round it onto the rim. Make sure to keep the tube in the right position throughout the mounting process.
- To install the upper tyre bead and adjust position of the tyre bead (same as mount of the lower tyre bead in Fig. 15). Draw out the roller and keep its side surface 1—2cm away from margin of the rim. Place the press block on the upper bead 20cm clockwise away from the mount/demount head. Press the control lever to make the press block go down 5—7cm to press the sidewall by hands to seat tyre bead into the rim groove (Fig. 16).

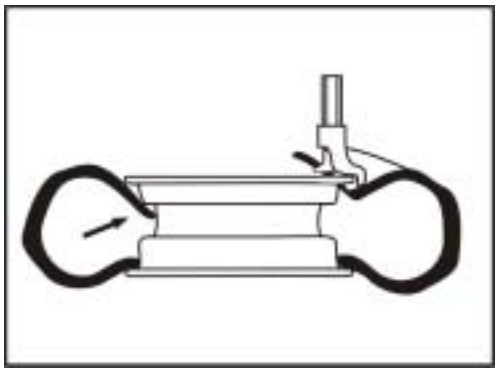


Fig.16

- Depress the pedal " " to turn the turntable while keeping pressing on the tyre. When only 10—15cm is left, slow down to avoid damage of the tyre bead. Stop the motor if there is any indication for damage. Lift the pedal "" by foot to turn the turntable counter-clockwise. Try again after making the tyre back to the original shape.

Attention:

- *If the rim size does not change, it is not necessary to loose the locking handle after finishing the mount and demount of the tyre and adjust the mount/demount head before mount and demount of tyre. The operation will be continued by depressing the column tilting control pedal to make the titling column let go and restore automatically.*
- *Make sure nobody is behind the tilting post when depressing pedal (G).*
- *In the process of clamping, keep head and hands away from the area between the tyre and the horizontal arm in case injury would be incurred.*

Inflating tyre

Danger!!

Inflating can be highly dangerous. Take precautions and pay close attention to the procedures. Check pressure gauge and air circuit are in good condition before inflating.

The machine is equipped with a gauge to read the pressure in the tyre.

- Loose the wheel on the turntable.
- Connect the outlet of the inflating device to the air inflation valve as shown in Fig.17.
- Slowly and repeatedly depress the inflation pedal (to avoid over-high pressure) to make sure that the reading on pressure gauge within the manufacture's requirements. The pressure should not exceed 3.5 bar. The user may adjust the reducing valve in the machine to get different pressures according to requirements.

Quick-inflation:

- If the tyre is tubeless or the tyre does not match the rim hermetically, inflation method above-mentioned will has no effect. In this case, the quick-inflation should be adopted. The quick-inflation method is to depress pedal "" to lock the rim, then depress the inflation pedal on right-hand of the cabinet to its end quickly and loose the pedal immediately. The quick-inflation is finished with a rat-tat.

Atention:

Make sure that the tyre is clamped tightly, otherwise it has danger of death.

Warning: Danger of explosion!

The safety procedures should be closely followed. Review and abide by the following instructions. Otherwise serious injury or death can be resulted.

The manufacturer shall not be held responsible for any possible accident when the safety procedures are not followed.

- *Carefully check the dimensions of rim and tyre to see if they match each other. Check and make sure that the tyre is not worn or damaged before inflation.*
- *When a high pressure is required, remove the tyre from the tyre changer and resume the inflation in a special protective hood.*
- *Be careful when inflating the tyre. Keep hands and other parts of human body away from tyre.*

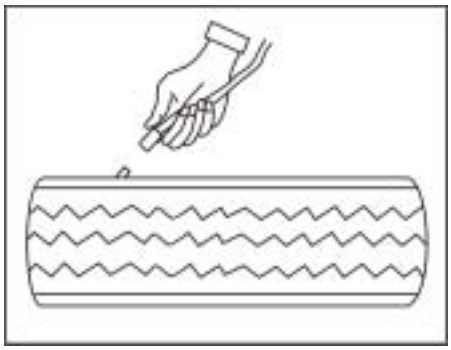


Fig.17

Right Supplementary Arm

Structure (Fig.18)

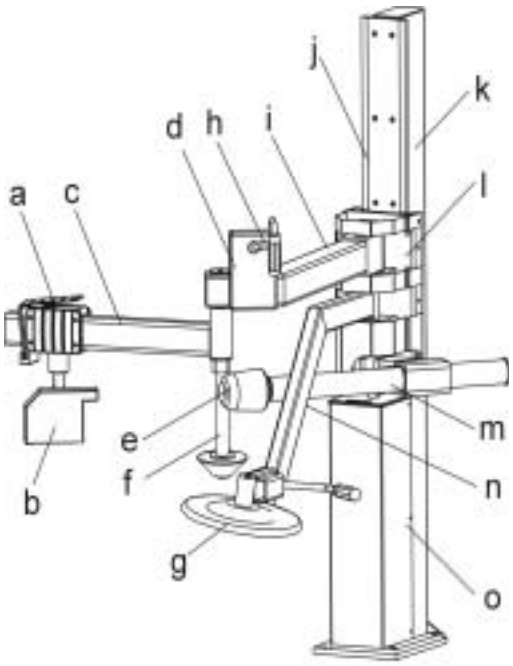


Fig.18

a- Slider
b- Press block
c- Fore swivel arm
d- Control box
e- Roller
f- Cone
g- Disk
h- Control lever
i- Back swivel arm
j- Sliding guide
k- Post weldment
l- Slide board
m- Roller arm
n- Disk arm
o- Lifting cylinder

Operation

Attention:

- *The supplementary arm is specially designed for TWC series pneumatic tyre changer of LAUNCH. Never mount it on other machines, otherwise, LAUNCH shall not liable for any accidents.*
- *The supplementary arm unit has function of automatic self-centering. The back swivel arm moves to center of turntable, it will lock automatically. Lift the control lever to unlock.*

Demounting Tyre

- After breaking bead from the rim completely following procedures described in last chapter, use the supplementary arm to simple operation.
- Use the cone to simple operation of outward clamping. Open the jaws outward(2-3cm away from periphery of the rim) and place the wheel on the turntable. Draw out the back swivel arm, fit and aim the cone at the central hole of the wheel (fig.19), press down the control lever to keep the rim close to the jaws, and depress pedal " " to clamp it (fig.20), remove the cone.

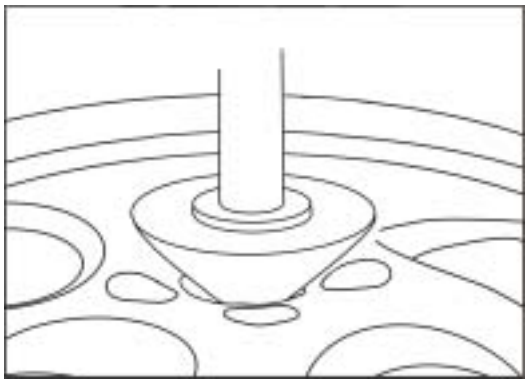


Fig.19

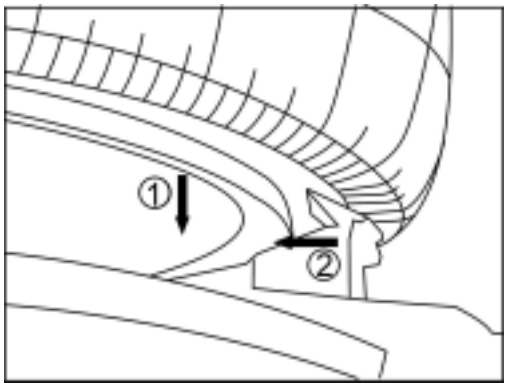


Fig.20

- Draw out the roller and make it close to the tyre bead. Press down the control lever to move the roller downward 3-5cm, depress the pedal " " to turn the turntable clockwise lubricating the tyre bead by a brush (fig.21).

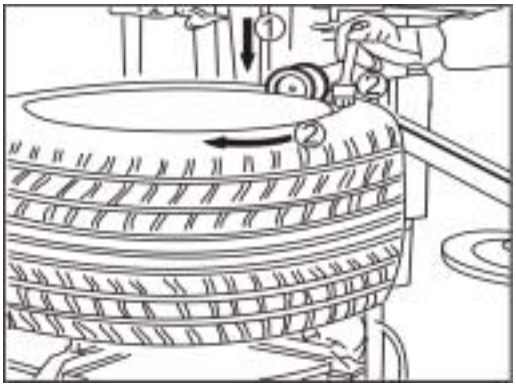


Fig.21

- Adjust the mount/demount head to right position and lock it following the procedures in last chapter.
- Insert the tyre lever into between the mount/demount head and the tyre bead. Lift the control lever to move the roller to its none working position (fig.22).

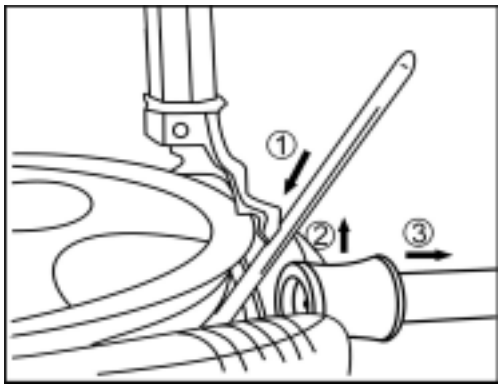


Fig.22

Turn the swivel arm, and place the press block on the tyre opposite to the mount/demount head. Lower down the control lever to press down the block 5-6cm, then prize the tyre bead onto the mount/demount head(fig.23). (The positions of the mount/demunt head and tyre bead are described in last chapter.)

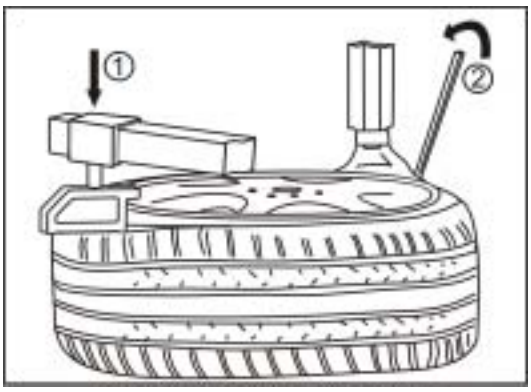


Fig.23

- Move the press block to its none working position, depress the pedal " " to turn the turntable clockwise until the rim is separated. In case of a tubed tyre, it is advisable to keep the air inflation valve to the right of the mount/demount head about 10 cm away to avoid damaging.
- If there is tube in the tyre, remove it first.
- Draw out the disk, and make the disk under the lower bead, but not under rim. Insert the tyre lever between the head and bead and press it down. Lift the control lever up to break the bead from rim groove. Make the lower tyre bead opposite to mount/demount head enter into the rim groove, and prize the lower tyre bead onto the ball protuberance (fig.24).

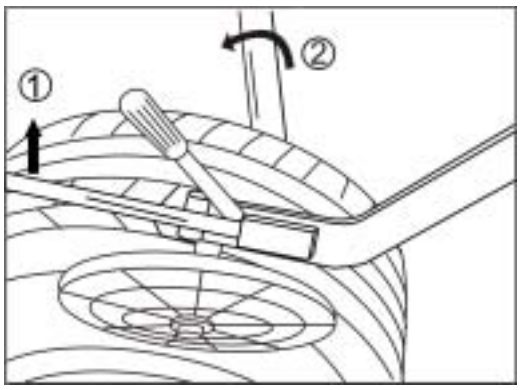


Fig.24

- Restore the disk and depress pedal " " until the lower tyre bead is separated from the rim. Depress the pedal " " to lose jaws, finally remove the tyre and rim.

Attention:

Keep hands and other body parts away from the moving parts of the machine. Never wear necklace, bracelet or loose clothes when operating the machine as it may cause danger!

Mounting tyre

Attention:

Check the size of tyre and rim to see if they match each other.

- Seat the lower bead following procedures in last chapter.
- If it is a tubed tyre, check first for the possible damages. Round it onto the rim. Make sure to keep the tube in the right position throughout the mounting process.
- To seat the upper tyre bead, place the tyre well and readjust position of the tyre bead (same as mount of the lower tyre bead). Draw out the roller and make its side surface 1—2cm away from margin of the rim. Place the press block on the upper bead 20cm clockwise away from the mount/demount head. Press the control lever to make the press block go

down 5—7cm to seat tyre bead into the rim groove (Fig. 25).

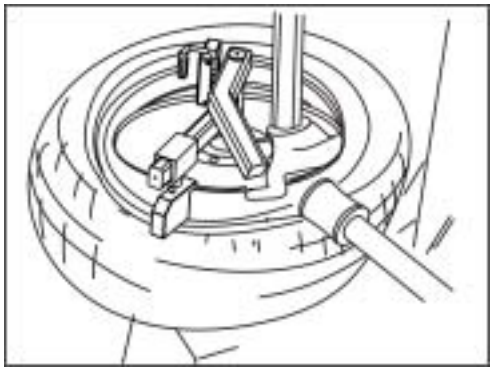


Fig.25

- Depress the pedal "" to turn the turntable clockwise. When only 10—15cm(Fig.26) is left, slow down to avoid damage of the tyre bead. Stop the motor once there is any indication for damage. Lift the pedal to turn the turntable counter-clockwise. Try again when the tyre is back to the original shape.

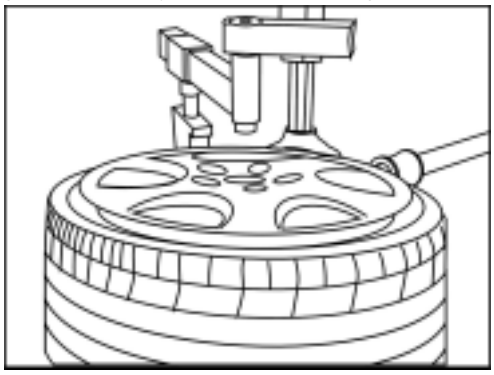
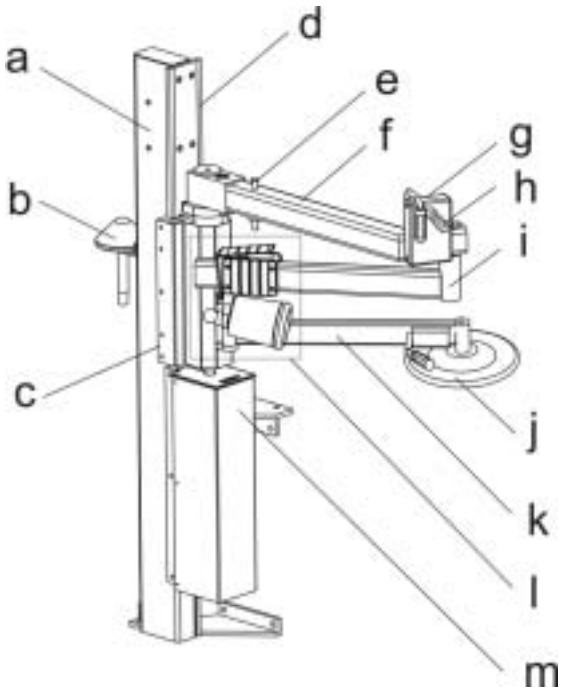
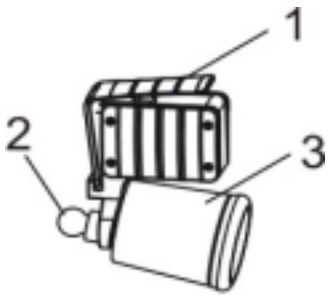


Fig.26

Left Supplementary Arm

Structure (fig.27)





I

a- Post
b- Cone
c- Hood
d- Sliding guide
e- Spacer pin
f- Back swivel arm
g- Control box
h- Control lever
i- Fore swivel arm
j- Disk
k- Disk arm
l- Roller
m- Cylinder
1- Locking clip
2- Knob
3- Roller

Fig.27

Operation

Attention:

- *The supplementary arm is specially designed for TWC series pneumatic tyre changer of LAUNCH. Never mount it on other machines, otherwise, LAUNCH shall not liable for any accidents.*
- *The supplementary arm unit has function of automatic self-centering. The back swivel arm moves to center of turntable, it will lock automatically. Lift the control lever to unlock.*

Demounting Tyre

- After breaking bead from the rim completely following procedures described in chapter operation, use the supplementary arm to simple operation.
- Use the cone to simple operation of outward clamping. Open the jaws outward(2-3cm away from periphery of the rim) and place the wheel on the turntable. Draw out the back swivel arm., fit and aim the cone at the central hole of the wheel (fig.28), press down the control lever to keep the rim close to the jaws, and depress pedal " " to clamp it (fig.29), remove the cone.

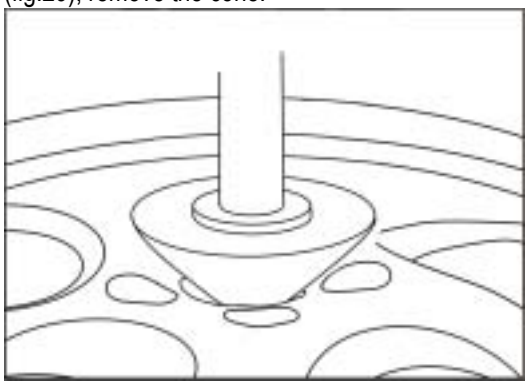


Fig.28

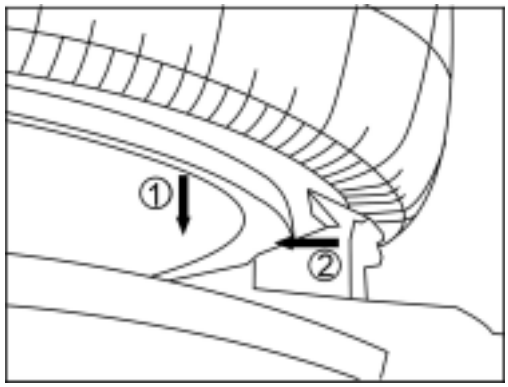


Fig.29

- Draw out the swivel arm and position it as in figure 30, press down the spacer pin (①,fig.30) to lock the fore swivel arm under back swivel arm. Following ②,③, press down locking clip and move the roller to the position 2-3cm away from rim. Lower down control lever to depress down tyre 3-5cm as ④, finally, pull out the knob as ⑤.

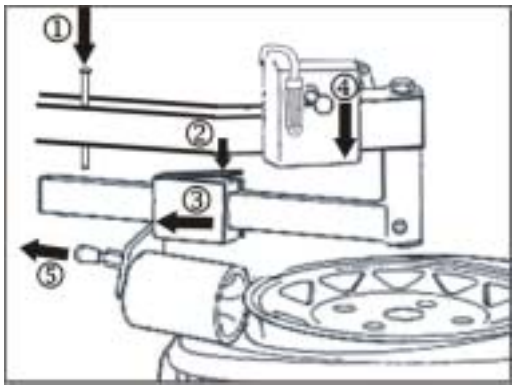


Fig.30

- Depress the pedal " " to turn the turntable clockwise, lubricating the bead with brush.(fig.31)

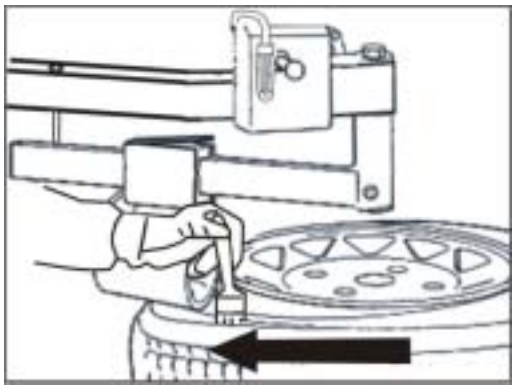


Fig.31

- Adjust the mount/demount head to right position and lock it following the procedures in chapter operation.
- Move the front swivel arm to the position as in figure 32, pull out spacer pin as ①, press down the knob as ②, lower down control lever as ③ to press down tyre 3-5cm, insert tyre lever between the head and the bead as ④, finally lift the lever to restore the roller.

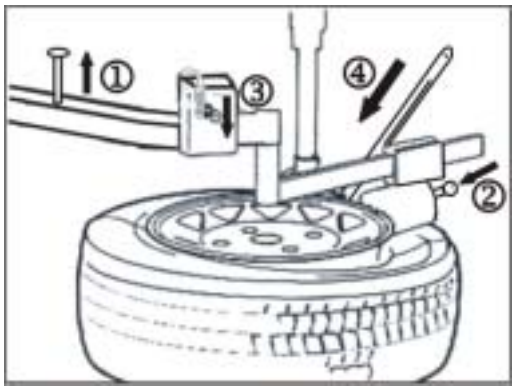


Fig.32

Turn the fore swivel arm, and place the press block on the tyre opposite to the mount/demount head. Lower down the control lever to press down the block 5-6cm, then prize the tyre bead onto the mount/demount head with tyre lever(fig.33). (The positions of the mount/demount head and tyre bead are described in chapter operation.)

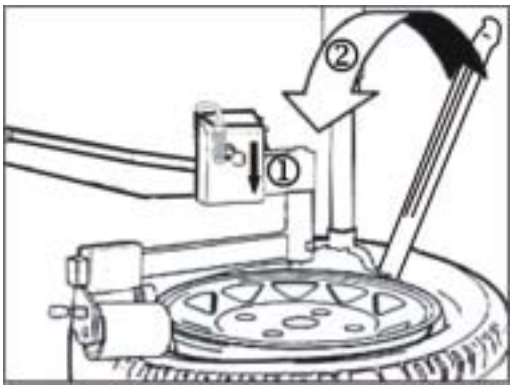


Fig.33

- Move the press block to its none working position, depress the pedal " " to turn the turntable clockwise until the rim is separated. In case of a tubed tyre, it is advisable to keep the air inflation valve to the right of the mount/demount head about 10 cm away to avoid damaging.
- If there is tube in the tyre, remove it first.
- Draw out the disk, and make the disk under the lower bead, but not under rim. Insert the tyre lever between the head and bead and press it down. Lift the control lever up to break the bead from rim groove. Make the lower tyre bead opposite to mount/demount head enter into the rim groove, and prize the lower tyre bead onto the ball protuberance (fig.34).

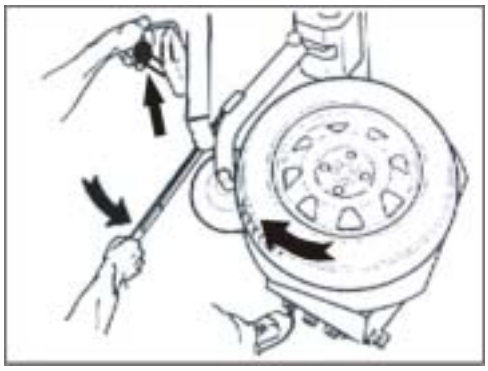


Fig.34

- Restore the disk and depress pedal " " until the lower tyre bead is separated from the rim. Depress the pedal " " to lose jaws, finally remove the tyre and rim.

Mounting tyre

Attention:

Check the size of tyre and rim to see if they match each other.

- Seat the lower bead following procedures in chapter operation.
- If it is a tubed tyre, check first for the possible damages. Round it onto the rim. Make sure to keep the tube in the right position throughout the mounting process.
- To seat the upper tyre bead, place the tyre well and readjust position of the tyre bead (same as mount of the lower tyre bead). Draw out the roller and make its side surface 1—2cm away from margin of the rim. Place the press block on the upper bead 20cm clockwise away from the mount/demount head. Press the control lever to make the press block go down 5—7cm to seat tyre bead into the rim groove (Fig. 35).

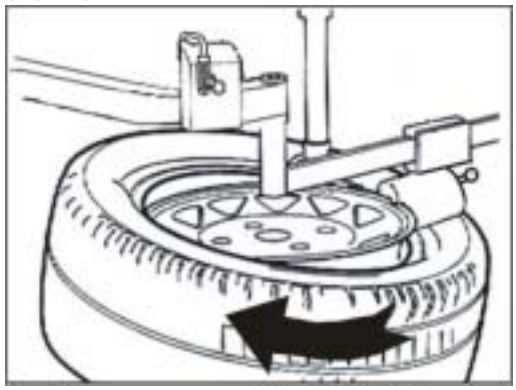


Fig.35

- Depress the pedal " " to turn the turntable clockwise. When only 10—15cm is left, slow down to avoid damage of the tyre bead. Stop the motor once there is any indication for damage. Lift the pedal to turn the turntable counter-clockwise. Try again when the tyre is back to the original shape.

Trouble Shooting

Symptom	Cause	Solution
Turntable can turn only in one direction.	◆ Power switch is damaged.	◆ Replace the power switch.
Turntable doesn't turn.	◆ Belt is damaged. ◆ Power switch is damaged. ◆ There is problem with motor. ◆ Belt is loose.	◆ Replace the belt. ◆ Replace the power switch. ◆ Check power wire of motor. If the motor is damaged, replace it. ◆ Tension the belt.
Turntable can not lock the rim tightly.	◆ Jaws are worn. ◆ Air leakage in clamping cylinder.	◆ Replace the jaws. ◆ Replace the cylinder seal.
Horizontal arm and hexagonal column can't be locked.	◆ The locking square board in wrong position. ◆ The locking hexagonal board in wrong position.	◆ Adjust them to right position according to this manual.
Horizontal arm doesn't move after pushing or pulling. Vertical shaft can not move upwards or downwards.	◆ Square locking board is not in correct position. Hexagonal locking board is not in correct position.	◆ Refer to the chapter "Maintenance".
Tilting post tilting is too fast or too slow.	◆ The pushing cylinder expels too much or too little air. ◆ Pressure of compressed air has not reached 8bar.	◆ Open the side cover of the cabinet, slightly adjust two air inflation regulators by hand to smooth the movement, and then tighten the cap.
The locking valve is clogged after the lever is pressed.	◆ O-ring of the valve is damaged. ◆ There is problem with airflow regulating valve.	◆ Replace the valve or O-ring. ◆ Adjust or replace the pressure regulating valve. ◆ Replace the airflow regulating valve.
Pedal can not be restored to its original position.	◆ Return spring is damaged.	◆ Replace the return spring.
There is abnormal noise at the moving part.	◆ The fixing screw is loose. ◆ There is foreign matter inside.	◆ Tighten the fixing screw. ◆ Get rid of the foreign matter.
The motor does not turn or the output torque is not enough.	◆ The moving part is stuck. ◆ The capacitor is failed. ◆ The voltage is too low. ◆ The circuit is open.	◆ Get rid of the stuck point. ◆ Replace the capacitor. ◆ Pause and wait for the device to be restored. ◆ Repair.
Cylinder is weak in output.	◆ There is air leakage. ◆ Mechanical hindrance is causing the problem. ◆ The pressure of the compressed air is not high enough.	◆ Strengthen the seal. ◆ Fix the mechanical problem. ◆ Change the air source.
Air leakage is found.	◆ Air hose is damaged. ◆ The outlet of the air valve is damaged. ◆ The gasket cement is gone.	◆ Replace the related part. ◆ Add gasket cement. ◆ Add gasket cement.

Maintenance

⚠*Attention*:
Only the specialized technician can perform the maintenance. Before any maintenance, disconnect the power and keep the plug within the sight of the maintenance personnel. Shut off power and compressed air, push the air valve switch to "Off" position and depress pedal (H) for 3 or 4 times to bleed the residual compressed air in the machine.

To keep the tyre changer in good condition and to prolong the work life, it is necessary to do regular maintenance according to the instructions on the user's manual. Otherwise, the normal operation and reliability of the machine will be affected, or personal injury would be caused.

- Keep the machine and working area clean, prevent dust or foreign matter from entering the moving parts.
- Keep the hexagonal column clean and dry (clean with diesel as in Fig. 36).
- Keep the horizontal arm and horizontal pole clean and lubricate them periodically so that it can move expectably.
- Weekly clean the turntable, jaws, guideways (Fig. 37).
- Weekly clean and lubricate base pin.
- Weekly lubricate the faying surface between moving parts and rubbing surface with lithium lubricant (grease).
- Check the oil level in the oil cup regularly. If the oil level does not reach the second line, fill SAE#20 (Fig.38).
- Regularly drain the condensed material in the air cleaner.
- Regularly check and adjust the tension of the belt.
- Check all connecting parts and bolts regularly and tighten them if necessary.

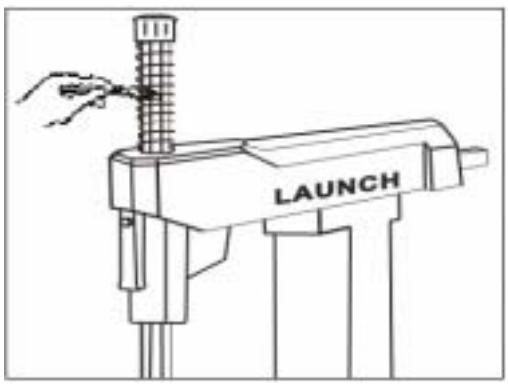


Fig.36

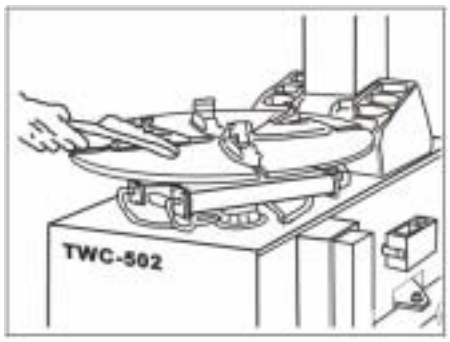


Fig.37

Fig.38

- Check and adjust the locking mechanism of hexagonal column periodically to insure the distance between hexagonal column and rim (regularly 2~3 mm approximately) after the hexagonal column is locked.

⚠*Attention:*
Tighten the fixing screws (shown in Fig.39 as part A) on the turntable after every 15 days of operation.

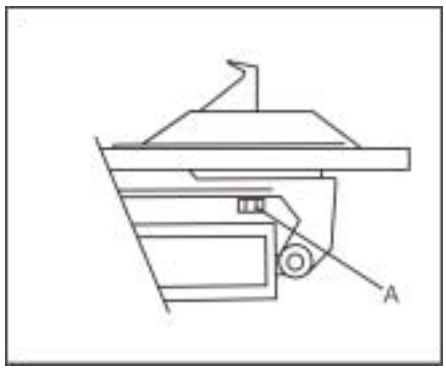


Fig.39

If the vertical clearance of the hexagonal column is too much, adjust it according to the following steps:

- Shut off compressed air.
- Remove the protective hood of the hexagonal column.
- Adjust the retaining nut of lead screw or the pushing screw at the front of locking board by wrench.
- Turn on the compressed air and then check the position after locking.

If the horizontal arm can not be moved smoothly or the clearance is too much after locking, do the adjustment according to the following procedures:

- Open the protective cover of the tilting post.
- Adjust the M6 screws at both ends by wrench and push the arm at the same time until it can be moved smoothly. Then tighten the nut.
- Adjust the screw at middle by wrench and lock the horizontal arm to see the change until the clearance is satisfactory. Then tighten the nut.

Periodically clean the control valves for clamping jaws and bead breaker to insure their normal operation.

- Remove the side cover of the cabinet.
- Loosen the control valve muffler and air bleed valve muffler, and clean them with compressed air. (Fig.40)

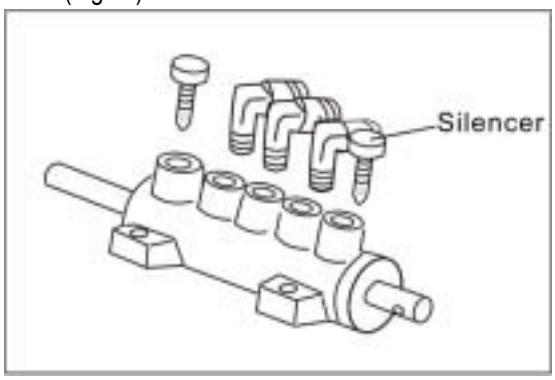


Fig.40

Optional Device – Digital Inflator

Performances：

- Accurate measure make reading right and inflation time short
- LED display clear, particular suitable for night and outdoor reading
- Finish measuring air pressure and inflation at the same time, making operation quick and convenient.
- May preset values of inflation and deflation. When the inflation gun is inserted into the tyre (non-empty tyre), the device will automatically test and decide inflation or deflation. When pressure of the tyre reaches the set value, it automatically stop and warn by the buzzer. When the tyre is empty and the "RUN/STOP" key is pressed, the tyre is automatically inflated to preset value.
- It can pause when the tyre is inflated or deflated.
- The device has swift function of air pressure unit and can show both Bar and Psi values.
- Beautiful appearance and convenient installation.

Specifications：

- Working Range：0~8Bar (0～116Psi)
- Precision：0.1Bar(1.45Psi)
- Air Source：Pressure 6~9Bar(87~130Psi)
  Flow>0.2M^3/min
- Inflation Speed：0.15 M^3/min
- AC Supply：According to local power supply
- Working Temperature Range: -10°C—+50°C
- Humidity：<95%
- Power：20W
- Net Weight: 5Kg
- Dimensions :120×195×100mm

Use Precautions:

- Power supply must be connected with the ground wire.
- See Figures 23 and 24 for pipeline connections of the inflator.
- There are no air supplies for these serial products. Air pressure of additive air supply must be under 9.5Bar. If not so, a reducing valve must be fixed at input air pipe to ensure that the air pressure of entering the inflator is under 9.5Bar.
- Compressed air must be passed the oil and water separator (air pressure regulator, gauge and lubricator assembly) at first, and then is connected into the inflator to avoid eroding internal parts of the device.
- An inflation pipe that is 9 meters in length is supplied with the device. If extension of the pipe is necessary, total length must not exceed 20 meters. Otherwise, working precision will decrease, or even the device can not work normally.
- When the device starts to work, the inflation gun should be deflated and not connected with the tyre. Thus, the zero air pressure is got correctly to ensure precision.
- Connection between the inflation gun and the tyre must be reliable and no leakage.
- When the device is used, its power supply must be far from the large power electrical applications. Starting and stopping of these applications can interfere the device accidentally. When interfere caused by the momentary failure of the power supply appears, sometimes abnormal errors will happen in the computer of the device. The case can be recovered to normal situation by that the inflation gun head is moved and the power supply is off and then on.
- Unit conversion:
  1Mpa=l0Bar
  1Bar=14.5Psi
  1Bar≈1Kg/cm^2

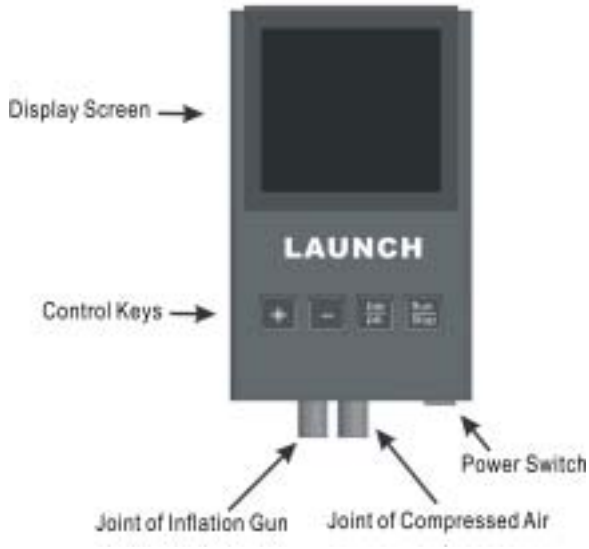


Fig.41

Operations：

- Air pressure unit is showed in "bar (b)" in this device. It can be changed to "psi (p)" unit by that "bar/psi" key is pressed.
- Choose right pressure according to specifications of the tyre. Press "+" or "—" key to set right pressure values that satisfy requirements of specifications of the tyre.
- After the pressure value is set, connect the clamping head of the inflation gun with the tyre. If the tyre own

pressure, the device will starts automatically. If the tyre is empty, “RUN/STOP” key must be pressed one time to start the device.

- When the device is working, it can be stopped if the “RUN/STOP” key is pressed one time. If the “RUN/STOP” key is pressed one time again, the device starts again.
- When pressure of the tyre reaches to the preset value, the buzzer works and the device stops.

Part Coding:

If necessary, please order parts from LAUNCH or dealers according to part coding (16AG600AX).

Circuit Diagram:

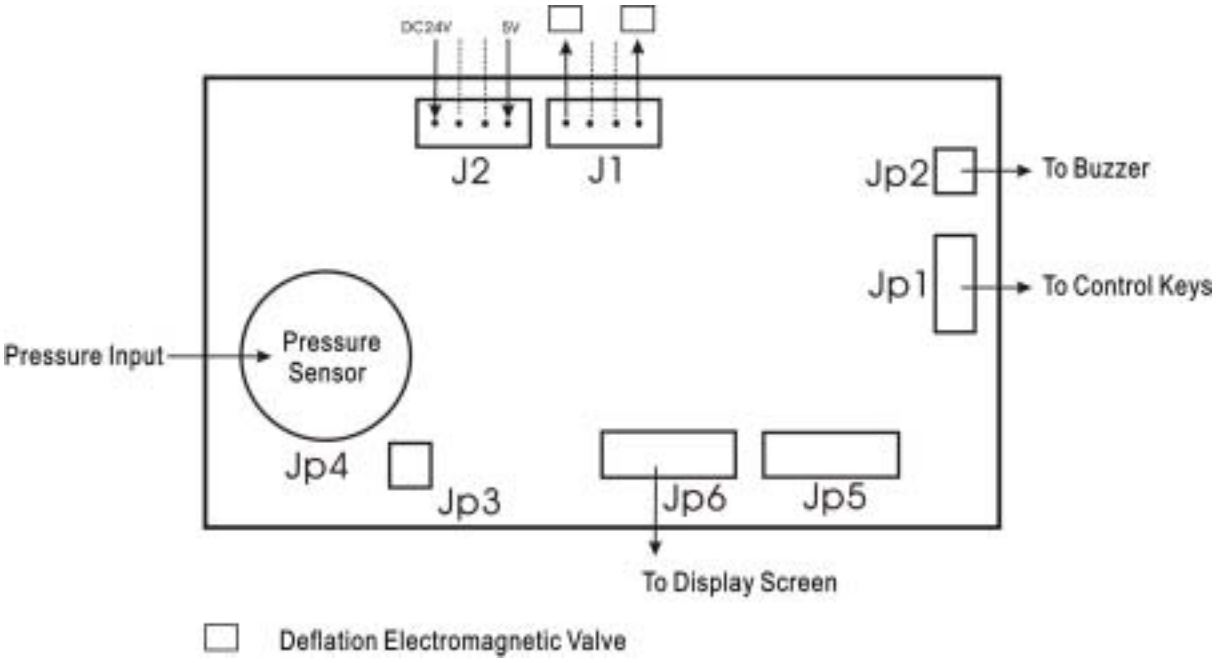


Fig.42

Storing

When the equipment needs to be stored for a long time:

- Disconnect the power and compressed air.
- Lubricate all the parts: slide block and groove.
- Empty all the oil/liquid cups.
- Cover the equipment with plastic shield.

TWC Series Oil Safety Data

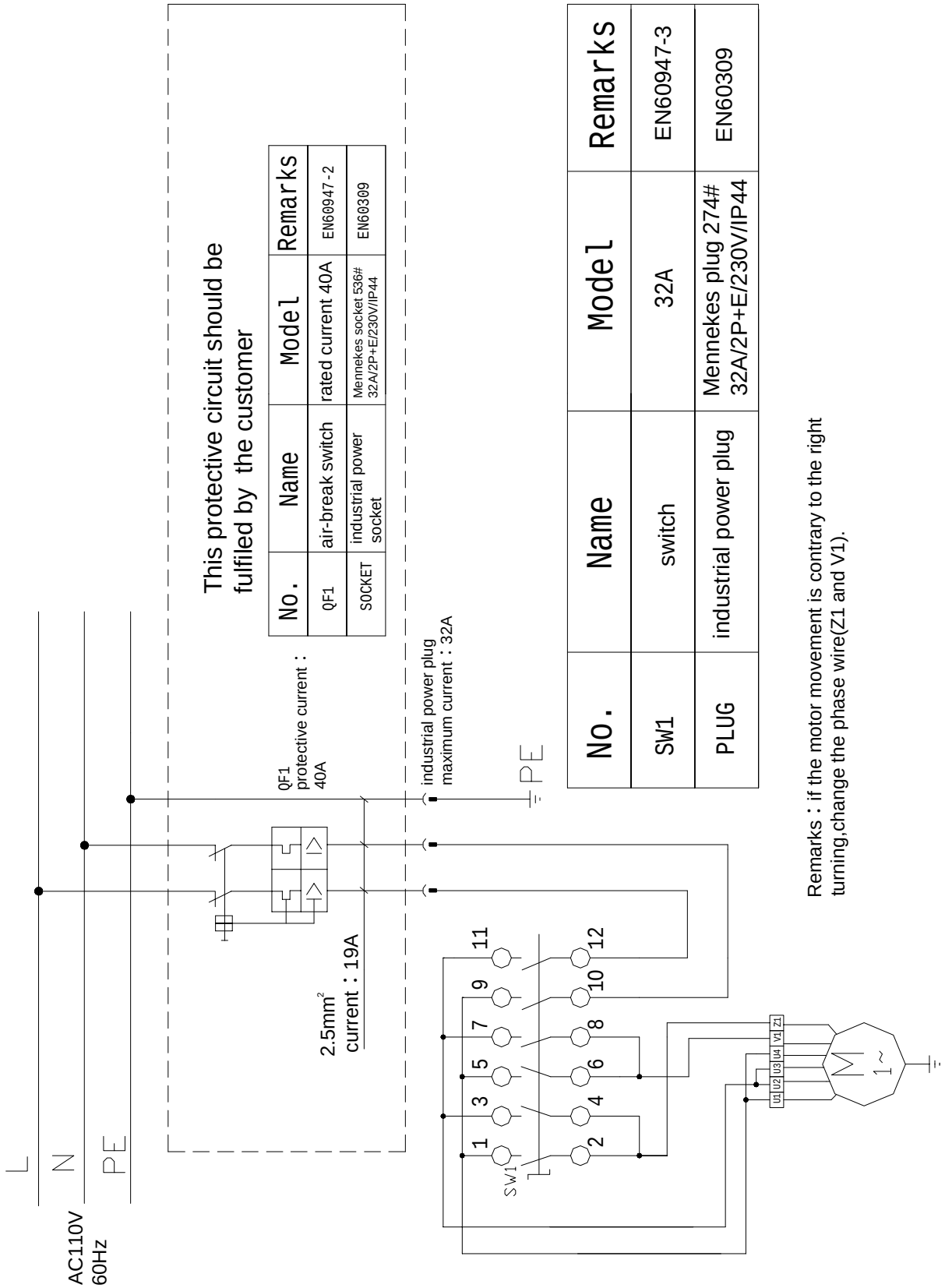
No. 2 lithium lubricant

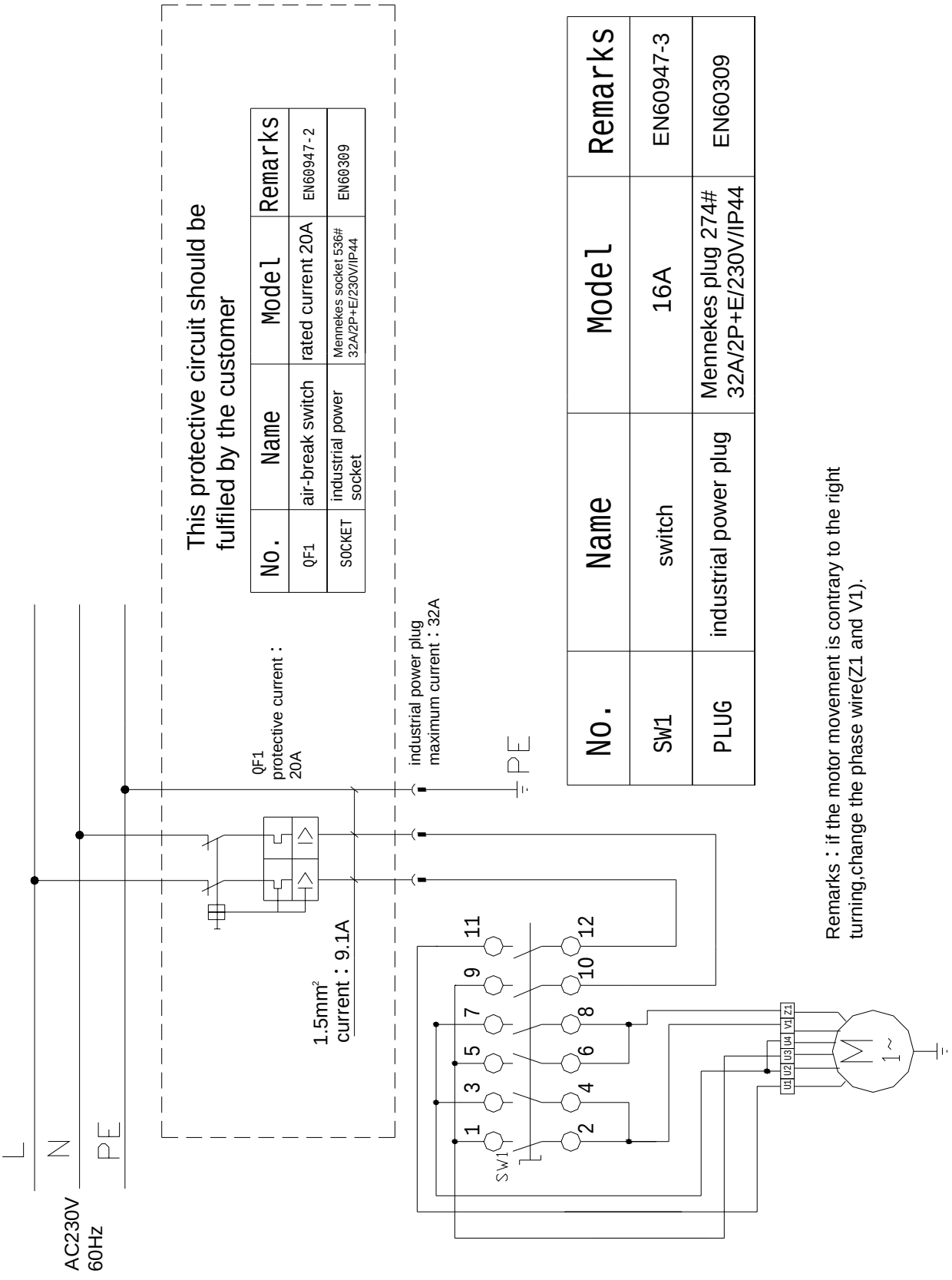
Item	Quality Index
Cone penetration (1/10mm)	278
Drop point °C	185
Corrosion (T2 Copper, 100°C, 24h)	No change in the copper
Wire separator (100°C, 22h)%	4
Evaporation (100°C, 22h)%	2
Oxidation stability (99°C, 100h)	0.2
Anti-erosion	Grade I
Foreign substance (microscopic method) Above 10 μm Above 25 μm Above 75 μm Above 125 μm	 Lower than 5000 Lower than 3000 Lower than 500 Lower than 0
Relative viscosity (-15°C,10s^{-1}), /Pa·s)	Lower than 800
Drip loss	Lower than 8

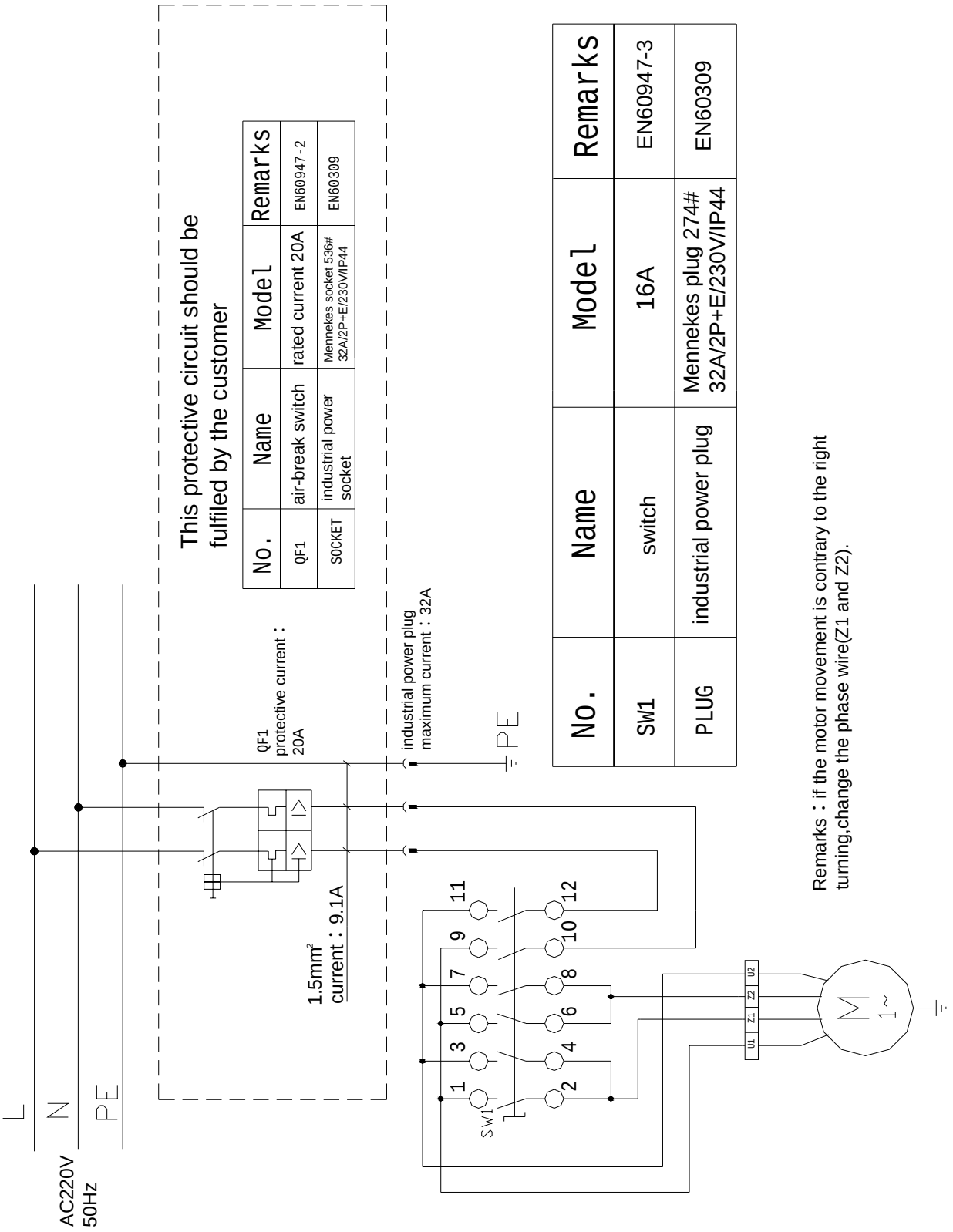
SAE20 Lubricant

Item	Quality Index
Density (15°C)	0.880
Flash point °C	213
Freezing point °C	-21
Viscosity 40°C	66.2
Viscosity 100°C	8.2
Viscosity index	95

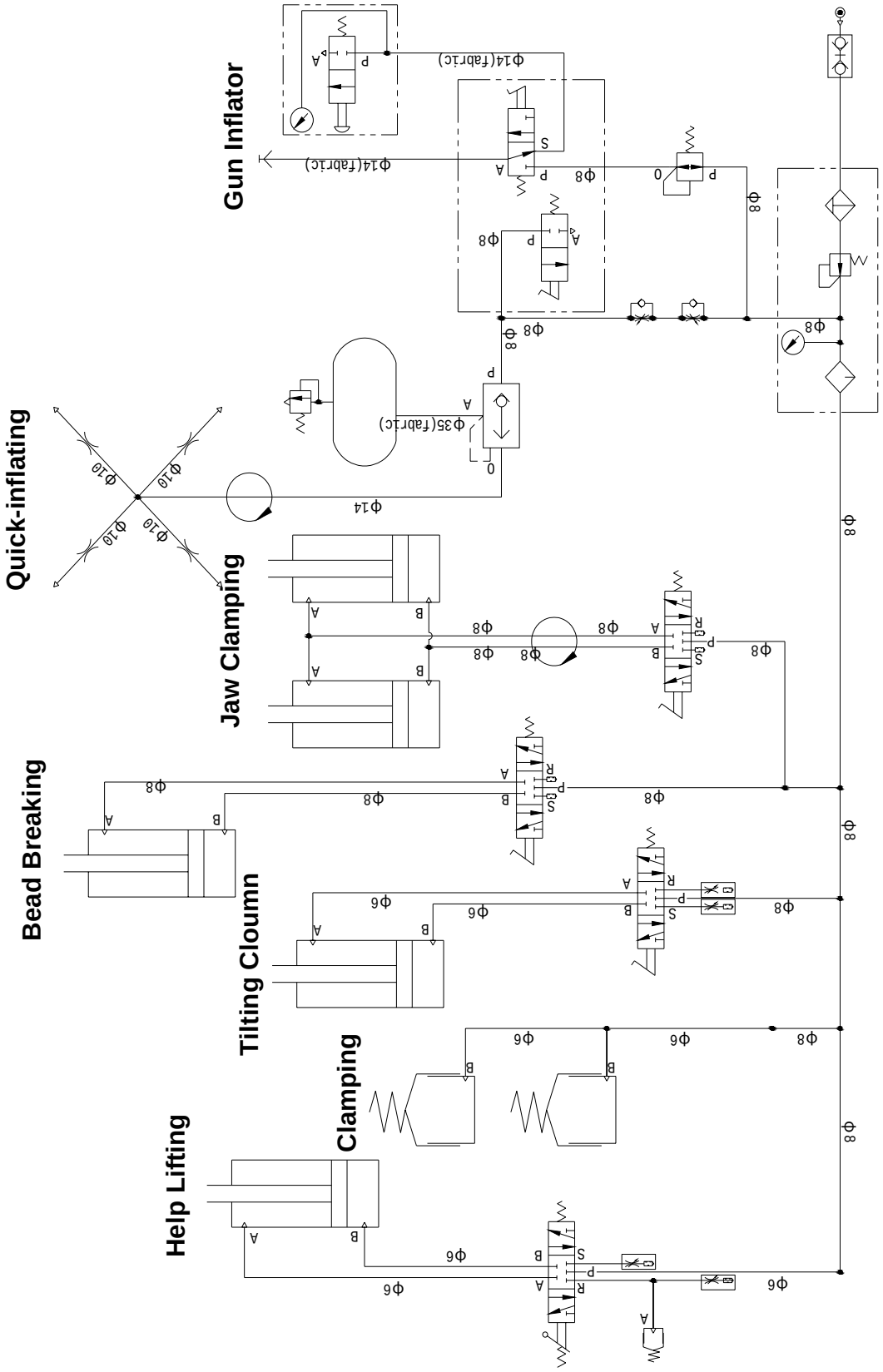
TWC Series Circuit Diagram


This protective circuit should be fulfiled by the customer
No. Name Model Remarks
QF1 air-break switch rated current 40A EN60947-2
SOCKET industrial power socket Mennekes socket 536# 32A/2P+E/230V/IP44 EN60309
QF1 protective current : 40A
industrial power plug maximum current : 32A
2.5mm² current : 19A
AC110V 60Hz
L
N
PE
SW1
1 2 3 4 5 6 7 8 9 10 11 12
U1 U2 U3 U4 V1 Z1
1~
No. Name Model Remarks
SW1 switch 32A EN60947-3
PLUG industrial power plug Mennekes plug 274# 32A/2P+E/230V/IP44 EN60309
Remarks : if the motor movement is contrary to the right turning,change the phase wire(Z1 and V1).


L
N
PE
AC230V
60Hz
This protective circuit should be fulfiled by the customer
No. Name Model Remarks
QF1 air-break switch rated current 20A EN60947-2
SOCKET industrial power socket Mennekes socket 536# 32A/2P+E/230V/IP44 EN60309
QF1
protective current : 20A
1.5mm²
current : 9.1A
industrial power plug
maximum current : 32A
PE
SW1
1 2 3 4 5 6 7 8 9 10 11 12
U1 U2 U3 U4 V1 Z1
M 1~
No. Name Model Remarks
SW1 switch 16A EN60947-3
PLUG industrial power plug Mennekes plug 274# 32A/2P+E/230V/IP44 EN60309
Remarks : if the motor movement is contrary to the right turning,change the phase wire(Z1 and V1).


This protective circuit should be fulfiled by the customer
No. Name Model Remarks
QF1 air-break switch rated current 20A EN60947-2
SOCKET industrial power socket Mennekes socket 536# 32A/2P+E/230V/IP44 EN60309
QF1 protective current : 20A
industrial power plug maximum current : 32A
PE
1.5mm² current : 9.1A
L
N
PE
AC220V 50Hz
SW1
1 2 3 4 5 6 7 8 9 10 11 12
U1 Z1 Z2 U2
M 1~
No. Name Model Remarks
SW1 switch 16A EN60947-3
PLUG industrial power plug Mennekes plug 274# 32A/2P+E/230V/IP44 EN60309
Remarks : if the motor movement is contrary to the right turning,change the phase wire(Z1 and Z2).

TWC Series Pneumatic Diagram



Warranty

THIS WARRANTY IS EXPRESSLY LIMITED TO PERSONS WHO PURCHASE LAUNCH PRODUCTS FOR PURPOSES OF RESALE OR USE IN THE ORDINARY COURSE OF THE BUYER'S BUSINESS.

LAUNCH electronic product is warranted against defects in materials and workmanship for one year (12 months) from date of delivery to the user. This warranty does not cover any part that has been abused, altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with instructions regarding use. The exclusive remedy for any automotive meter found to be defective is repair or replacement, and LAUNCH shall not be liable for any consequential or incidental damages. Final determination of defects shall be made by LAUNCH in accordance with procedures established by LAUNCH. No agent, employee, or representative of LAUNCH has any authority to bind LAUNCH to any affirmation, representation, or warranty concerning LAUNCH automotive meters, except as stated herein.

Disclaimer

THE ABOVE WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Order Information

Replaceable and optional parts can be ordered directly from your LAUNCH authorized tool supplier. Your order should include the following information:

1. Quantity
2. Part number
3. Item description

Customer Service

If you have any questions on the operation of the unit, please contact us:

Tel: 86-755-82269474,
Fax: 86-755-82264570,
E-mail: overseasales@cnlaunch.com.

If your unit requires repair service, return it to the manufacturer with a copy of the sales receipt and a note describing the problem. If the unit is determined to be in warranty, it will be repaired or replaced at no charge. If the unit is determined to be out of warranty, it will be repaired for a nominal service charge plus return freight. Send the unit pre-paid to:

Attn: Overseas Department
LAUNCH TECH. CO., LTD.
Xinyang Building,
Bagua 4th Road,
Shenzhen, Guangdong Province, China